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Governor of Louisiana

L. D. YOUNG, JR.
Director

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Editor

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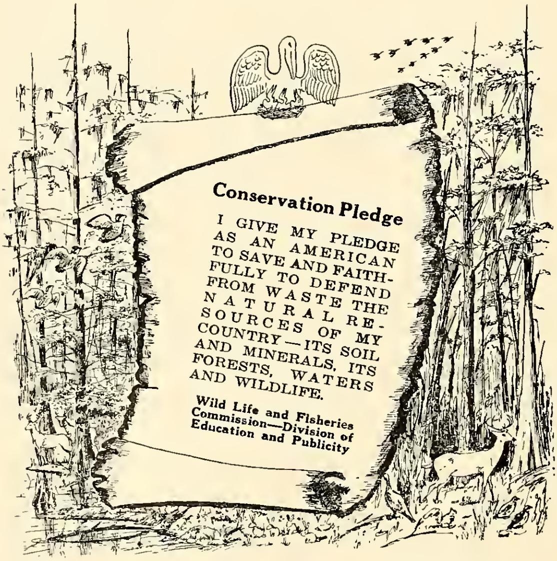

Conservation Pledge

I GIVE MY PLEDGE AS AN AMERICAN TO SAVE AND FAITHFULLY TO DEFEND FROM WASTE THE NATURAL RESOURCES OF MY COUNTRY—ITS SOIL AND MINERALS, ITS FORESTS, WATERS AND WILDLIFE.

Wild Life and Fisheries Commission—Division of Education and Publicity

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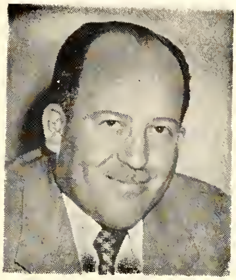
Shrimp season in "Inside Waters" will open April 16 and luggers such as these will continue to boost the annual shrimp harvest in Louisiana. The 1955 catch in Louisiana reached almost 100,000,000 pounds. Photo by Jack Britt

Message from the Director . . .



L. D. Young, Jr.
Director

Louisiana
Wild Life and Fisheries Commission

Theodore Roosevelt has been generally acclaimed as the father of the wildlife conservation movement because it was he, while president, who saw the danger in the beginning of the decline of our wildlife population and took the first steps nationally in what has become our fight to retain and restore the wildlife resources to as least some semblance of their former abundance.

But it was another president of these United States, Herbert Hoover, not renowned himself as a sportsman or wildlife authority, who fashioned simple words into immortal beauty of thought and truth when he wrote:

"To go fishing is the chance to wash one's soul with pure air, with the rush of the brook, or the shimmer of the sun on blue water. It brings meekness and inspiration from the decency of nature, charity towards tackle-makers, patience toward fish, a mockery of profits and egos, a quieting of hate, a rejoicing that you do not have to decide a darned thing until next week. And it is discipline in the equality of men—for all men are equal before fish."

What a dignity shattering, arrogance deflating, ego smashing thing an even little fish can be. Millionaires, martinets, indigents and mere men look the same to a fish, and they all share the same kind of thrill if they are able to outwit one. Fishing, like the fish, is the one sport that knows no class distinctions. You may own the richest yacht, the finest and most expensive of gear; you may have the time to visit the far places where capital fish abound, but all this avails you nothing if the fish prove contrary.

A boy with patches on the seat of his pants, a rusty hook, a string line and a slender limb of a tree for a pole, may—and often does—catch a better string of fish.

There's a nostalgic warmth to the breezes again that are a prelude to summer . . . promising soothing days in the sun with a fishing rod in our hands and anticipation in our hearts; and the hope that the greatest of all emancipators—the fish—will look with favor on the lures we offer.

DYNAMIC Conservation

By Percy Viosca, Jr.

Part 1 of Two Parts

Conservation, the act of conserving, from the Latin *conservo (con,* with and *servo,* keep) means to keep or save and therefore to prevent loss. In its modern concept, it implies use, especially wise use. Dynamic means involving action, as opposed to static. It implies efficiency, also cause and effect—production by the application of energy or an efficient agency to bring about a certain result. Dynamic conservation may be defined then as the prevention of loss by an efficient agency which applies energy to bring about a desired result.

The dynamic conservationist thinks in terms of highest possible sustained yields of renewable natural resources. He considers any portion of a resource not utilized as much of a loss as that which goes down the drain or up in smoke without deriving any benefit therefrom. He cannot excuse the application of unwise restrictions which limit human endeavor in favor of man's competitors, the predators, parasites and scavengers.

Let us compare conservation with modern agricultural practices. What does a farmer do to raise a crop? Does he go into the woods to scatter his seeds (restocking), then establish a closed season, and bag limits? If he should happen to raise some carrots in the woods, does he gather four per day if the carrot warden is watching and ten if the warden is down at the club playing poker?

No, the first thing the farmer does is to destroy. He uses energy to deforest the land, to burn the weeds, to plough and condition the soil. He adds the needed fertilizer and trace elements, irrigates when water is lacking. If he overplants, he destroys the excess in order to use sunlight efficiently. Shading will slow down the rate of photosynthesis and reduce his production. Therefore he tries to grow the right amount of each species to produce maximum yields per unit of area as determined by years of experience. He tries to avoid the consequences of overpopulation: starvation, disease and a high mortality. His is a continual fight to destroy the weeds, poison the rabbits, shoot the crows, and repair the fences which keep out the pigs, cows and human poachers. He must also use energy and intelligence to harvest his crop. Yes, modern agriculture is a dynamic procedure from start to finish.

It will be a long time before the management of nature's crops approaches agriculture in efficiency, if ever, because the problems of the wildlife manager are more complex than the most complicated agricultural problems. The farmer can isolate his carrots and raise them in pure culture, whereas the wildlife manager may want "carrots" but is producing rabbits. He may want rabbits, but is producing foxes. He may want foxes, but is producing eagles. He may want healthy eagles but is also producing disease germs and parasites. It is even more complicated than this because there are many competing species in his area of surveillance, and the interrelationships increase in complexity as we climb to the top of the food chain pyramids. The product we desire most may be the apex of the pyramid, its smallest portion. With uncontrolled predation by birds, mammals, snakes, gars, sharks, and other top-notch predators, the conservationist is lucky if he harvests one fish out of each thousand produced, whereas, when a good yield is the reward of the farmer's efforts, he can sell a thou-

sand pounds of corn to each pound he keeps for seed.

The fish manager not only has to deal with and control, to the advantage of the human race, the physical, chemical and biological activities which take place in the water, but also those which occur on the adjacent watersheds and in the overlying atmosphere. He has to deal with certain limitations of space, energy and materials. In his environment, be it a running stream, pond, lake, coastal water, or the open ocean, he always finds a disproportion between the nutrient substances available and the demands of organisms. Some nutrients are greatly in excess of requirements, others so restricted that they are always in great demand. Sometimes plants cannot make use of abundant nutrients because they do not have enough of the rarer substances to supply their daily needs. Fish cannot make use of abundant food supplies when their oxygen supply is short. This brings up the *Principle of Limiting Factors*, or *Law of the Minimum* as it is usually called.

The American Indian had an unlimited supply of earth to build his mounds and enough materials to make his baskets, but he lacked iron; and before the white man came, there was no horsepower, not even from horses. The rate that he could pile up earth was restricted, then, by these limiting factors.

Today, our civilization approaches the opposite extreme. With our almost unlimited supplies of iron and power, we are able to make bulldozers, draglines, dredges, trucks and other heavy dirt moving machinery. A few men, with such modern machinery and the horsepower to apply it, could build a mound or pyramid of earth in a few hours that would have taken the Indians with their baskets, at least a thousand years to construct. Not long ago, I saw a single bulldozer destroy the remains of a thousand years of Indian civilization in a matter of minutes.

Whereas the early Indians subsisted mainly on a hunting economy, they became more and more agricultural as the centuries passed. In time they not only planted maize but buried three fish to each stalk, adding to the native soil nutrients the limiting factors (nitrogen, phosphorus and other salts) derived from decomposing fish. Thus, they too had developed a dynamic agricultural practice.

At the time of Columbus, it was likely that the American Indian population was fairly static, that is, it had come into balance with its environmental

—*Photo by Gresham*

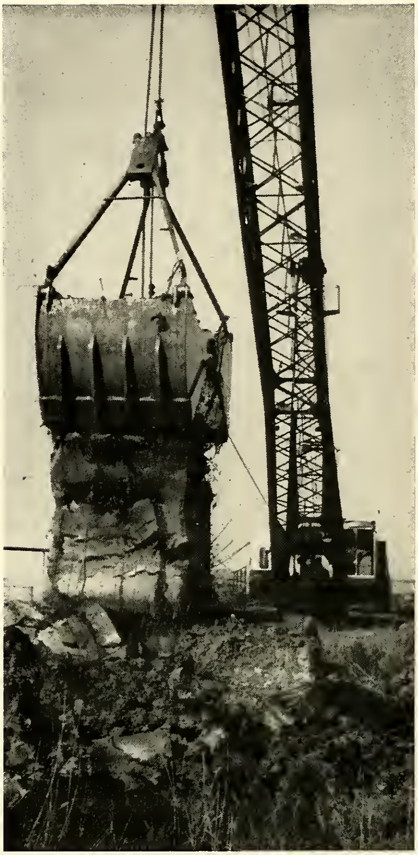
This lake (Sunk lake in Avoyelles) is rejuvenated by the rich backwater from Red River. Waterbodies undergoing this change are highly productive. Man would do well to imitate such natural processes.

pressures. The Europeaen settlers, however, freed from the restrictions made necessary by the struggle for existence in over-populated Europe, and with their greater know-how as a result of this long struggle, immediately began a mushroom-like expansion. Their increase in a few centuries to the present population of America is fantastic when compared to the relatively sparse Indian population which developed on the same land area after several thousand years.

In many parts of the world, people go to bed hungry, mostly protein-starved for lack of nitrogenous foodstuffs. Rationing is a restrictive form of food conservation. It can help the people concerned in a biological manner which is not pleasant to contemplate, by increasing their susceptibility to disease until, through an increased death rate, their population comes into better balance with the available supplies of nitrogenous foods.

Let's look at the other side of the picture. By the turn of the last century our own expanding population had begun to experience a nitrogen shortage. Did we try to save the situation by imposing restrictions on protein foodstuffs?[1] No, America, still young and dynamic, put its best brains to work. The result: nitrogen fixation by electric power. For this purpose, it became necessary to conserve water by means of huge power dams, a type of water conservation which must not be confused with the restrictive use of water. It is definitely dynamic. Its purpose is to put more water through the generators, using more of it and extending the period of use. As a result, we are now producing all of the nitrogen necessary for our needs and then some.

In order to utilize this nitrogen to best advantage, we have developed soil and water conservation, scientific soil fertilization, animal husbandry and many other things, to the end that we are now producing about four pounds of beef on the same land



—Photo by Blanchard

Draglines can "make" or "break" a marsh in productiveness.

Rough fish must be harvested.

—Photo by Britt

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[1] Admittedly, during war times, there were some relatively insignificant attempts in this direction.

surface that produced only a single pound a few years ago. Such practices are definitely dynamic.

True, some of our concepts of conservation have been warped by such happenings as the rapid depletion and even extermination of certain stocks of birds and mammals. Only recently have we learned that it is the encroachment of civilization upon their breeding and feeding grounds, rather than the rate of harvest, that is mainly to blame. We cannot compare slowly reproducing species, especially migratory birds which expose themselves twice yearly to the natural, and now artificial, hazards of migration, to such prolific species as fish and shrimp. In most aquatic, cold-blooded animals, the reproductive potential is thousands to millions for each adult female which reaches spawning size. Six crabs or 50 shrimp could stock Lake Pontchartrain with ten pounds per acre in one season were there no limiting factors to prevent such uncontrolled expansion.

Fish yields are not as much the result of abundant seed stock as the result of a squeeze between the physicochemical environment on the one hand and population pressures on the other. It is certainly not the number of young produced which determines the eventual standing populations of most aquatic species, but how much suitable environment is available for their growth and maturity. Fish productivity depends primarily upon food supplies, and these in turn upon the availability of nutrient substances. In the last analysis, phosphorus seems to be the chief limiting factor in most cases, with nitrogen shortages in second place.

It requires about one pound of phosphorus to make some 300 to 400 pounds of living organisms. It doesn't make much difference whether these are bass, croakers, gars, sharks or human beings. The rate at which this phosphorus becomes available in the food chains of the different species determines the total production of each. All fish are competing against their brothers as well as against fish of all other species for the limited supplies of this one element. Therefore, if we approach fish management from the chemical viewpoint, we find that all individual fish are in direct competition with all other individuals in the same environmental system.

Let us visualize a hypothetical freshwater lake containing, among other species, a population of black bass and freshwater drum (gaspergou to Louisianians), or a saltwater lake with a population of speckled sea trout and croakers. The idea of restocking of these lakes with bass and sea trout respectively, to increase the ratios of these species to fresh water drum and croakers, has been outmoded as a result of recent biological studies. In the light of water chemistry, how can restocking with one species make more phosphorus available to that species? Because of limiting factors, the residual population of each species in any balanced biological association tends to be more or less constant. To attempt to increase this population beyond the biological limits set by nature, by planting more fish, is in itself a disturbance which may derange the biological balance and reduce the very species we wished to increase.

If we analyze the operation of the *Law of the Minimum*, we are led to many complexities. In the chemical sense, there are four sources of nutrients for any body of water: the atmosphere, the inflow of water from outside sources, the organic and inorganic nutrients returned by decomposition of dead organisms, and the materials which have gone out of circulation and have been stored away in the

—*Photo by Britt*

Oyster cultivation is one of the earliest dynamic conservation methods.

bottom sediments. A residual population in balance with its environmental pressures can only be increased by increasing the amounts of nutrients derived from these various sources in a given time period without deranging this balance.

Thus, we introduce the time factor or rate of cycling. This is fraught with even greater complexities, for the organic economy of a body of water is the result of interplay between synthesis and breakdown, and here rate is the important thing. For instance, if a stable stratification develops in a body of water, and products of breakdown, such as phosphates and nitrates, become locked in the sediments, one or more of the cog-wheels in the cycle of nature is retarded, and the whole cycle slows down. In the last analysis, it is not the size of the wheel but the rate at which it spins which makes for speed, and the rate at which the slowest wheel revolves determines the speed of the whole system.

Drums and croakers are bottom species which feed to a large extent on clams, mussels, and other bottom organisms. In digging for food they stir up the sediments, bringing locked up nutrients to higher sunlit levels in the water. It is only in sunlit water that nutrient salts can nourish the tiny green plants which serve as food for small animals which in turn are eaten by small fishes such as minnows and herrings. Bass and sea trout feed not only on these small fishes, but also on the small drums or croakers when the former are in short supply.

Let us assume that we had achieved an increase of bass or trout as a result of our fish-stocking policy and, being predatory, these fishes had reduced the population of the young drums and croakers. Without enough drums and croakers to stir up the bottom, the rate of recycling of nutrients would be greatly retarded, and the tiny plants and animals and the small fishes would suffer in turn. There would not only be fewer young drums or croakers to serve as accessory food supplies, but also fewer minnows and other small fishes.

It so happens that both freshwater drums and croakers are overpopulated and underfished. Suppose, then, that instead of planting bass and sea trout, we had reduced the drum and croaker populations by commercial fishing as we thin out our carrots to give the remaining ones more sunlight energy and nutrients. Thinning out the crowded drums and croakers would give the survivors more food. As total weight gained is directly proportional to available fixed energy or food, the gross weight of the thinned-out populations will soon be the same again, but the individual fish will be larger. Larger fish are capable of utilizing food items of a larger size class, further accelerating their growth.

Bigger drums and croakers would mean more and deeper agitation of the bottom and a more rapid return of pent-up nutrients into the organic circulation which leads up to minnows or herring-like fishes and bass or sea trout. Thus, commercialization of the drums and croakers, which is a revenue producer, rather than restocking with bass or trout, which is an expense, would give us not only bigger and better drums and croakers, but also bigger and better bass and sea trout.

Fish populations have a tendency to become balanced, and therefore static, except in newly developed habitats such as those created by a major flood or in newly impounded waters. In these, the total population increases at first at an explosive rate. In natural lakes and old impoundments, where production is relatively low and constant, we must devise better methods of management if we want them to produce more fish.

—*Photo by Britt*

Gizzard shad are trash fish which can destroy any lake when they become overpopulated.

The productivity of an area, as far as human utilization is concerned, should be measured, not by what exists in it, but by what we take out. Seldom can a majority of the game fish in a body of water be taken by angling because of the automatic increase in their natural food supply which follows removal of these predatory species by the very act of angling. Certainly they cannot be fished out to the point where a shortage of brood stock will occur. Yet, much restrictive legislation seems to be designed to save all of the eggs for restocking an environment which has space and feed for only two fish, and where that space is already occupied by the hungry, and sometimes cannibalistic parents of the brood. We saw that with prolific species, the ecological conditions were far more important than the number of eggs laid.

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Look for Part 2 in May-June Issue

—Photo by Blanchard

Hidden Lakes

By John Blanchard

This is Louisiana . . . I live here . . . I'm a fisherman.

Big lakes, wide and deep rivers, expansive, windblown water bodies don't appeal to me. There's nothing wrong with me that a few trips into the back country won't cure . . . trips to the hidden lakes of Louisiana where there's no sound of outboards, no evidence of a water ski ever having been slid over the twinkling surface; where there's peace, the stillness shattered only by the twitter of a red bird or the bark of a fox squirrel; where the bass have seen few, if any, plugs or flies; where picnics are disturbed only by a few buzzing mosquitoes and perhaps a few hungry ticks; where your campfire smoke drifts skyward through giant cypress, and does not get into the eyes of nearby campers who complain about smoke, snores, loud talk or argue about seasons and bag limits.

Think I'm looking for a Utopia? No. There are numerous such lakes in Louisiana, in many of which I have drowned shiners and worms, dunked plugs and frightened 'gators from their perches in the sun.

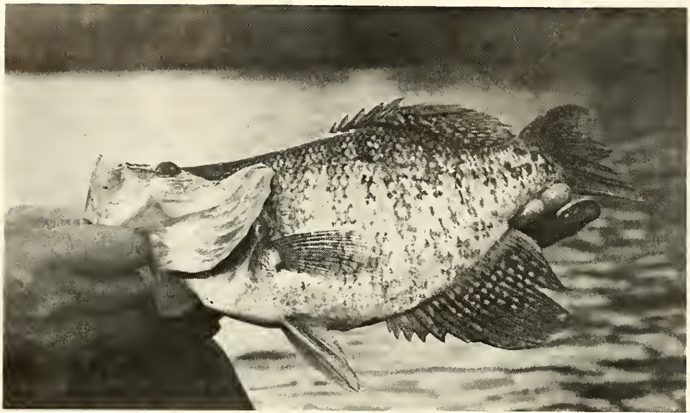
There are hundreds of these little back-country lakes dotting the landscape of this state and just waiting for a fisherman to visit. Many of these names you won't recognize, but they are in existence. For you Doubting Thomases, check the quadrangle maps of the state.

Let's take a trip down that winding, once navigable Tensas River, to get things kicked off.

Three miles north of the bridge across Tensas, on highway 48 some 17 miles east of Winnsboro or 17 miles west of Newellton, there's a little lake known as Trestle. Only a few acres in size, its black, cypress-studded waters yield one-pound bream,

—Photo by Blanchard

Big Cow lake, one of the many hard-to-reach water bodies dotting the countryside of Louisiana.



This is a typical specimen taken from one of the hidden lakes of Louisiana. This white perch, crappie or sac-a-lait weighed two and one-half pounds and was caught on a river runt in Upper Fool River, Tensas Parish. He's just about full grown.

—*Photo by Blanchard*

pound chinquapin (red ear), six-pound bass and extraordinary sac-a-lait or white perch. Boats? Take your own, a light one or a canoe which you'll have to drag across dry land. It's worth it, especially during the spring and fall months. Don't go during the summer because that's the fermentation time for Trestle.

My pride and joy is located down river from the same highway bridge—about two and one-half miles—and is known as Moon lake. You'll have to drag across it, too, or wait until summer and go via jeep. Too late, it's fermenting then, too. Spring, fall or winter are best, but you must take your own boat, stop at Moon lake landing (no signs here) and take a 500-yard walk due west.

Fred Nielsen, my fishing friend from Winnsboro, and I have a standing joke. "Let's catch 37 bluegills and then try the bass." The 37 don't take long via fly rod method and the rest of the day is spent casting for largemouth bass, some of which are in the prize-winning category. The fish are almost as dark as the blue mud in the bottom of the lake.

Behind Moon are East Johnson and West Johnson, both of which will yield plenty of the top three—bass, bream and white perch. This is also jeep country the year 'round and available only to the hearthy souls, such as you. The land is not posted around any of these hidden lakes and bulldozer roads lead to all of them. Please get specific directions from the natives in that vicinity.

Five miles farther down Tensas are Big Cow and Little Cow lakes and may be reached through Gilbert, Louisiana. They are shallow, lonesome and productive.

From Wisner, you might want to fish in Twin lakes, located on Hopeka plantation. Good, too, are Green and East lakes—in the same vicinity.

The small lakes from Sicily Island are Brown, Pendelton, and Moss.

The Ferriday-Jonesville-Harrisonburg area is dotted with these out-of-the-way water bodies which

—*Photo by Gresham*

Six-pound bass are not uncommon in the back country where the fishermen can hear each plunk of his plug; where he is not disturbed by fast motors and loud talk.

Here Bayou Macon runs into Tensas River. These two streams feed and restock numerous small lakes during the spring high-water period. Adjacent to their banks are some 30 woods lakes which harbor tackle busters in quantity and quality.

—Photo by Blanchard

house some tackle busters. Sergeant lake is a typical example, where the bluegill are black as the inside of a chimney, and these waters are the original home of the black bass. They are not green trout in this country, they're strictly black bass, speckled perch and deep-blue bluegill.

Hibbs lake is accessible for the more hearty from Jonesville, while Sandy is not too hard to reach, providing you have a taste for roughness.

From Sicily Island you might want to fish Wells lake, but there's a slight chance of hearing a motorboat but its popularity can be vouched for. No crowds or water skiers, however. Hoover lake is six miles south of Sicily Island. It is accessible to those who know where it is—about two miles southeast of Foules, Louisiana.

Seven miles west of Delhi you turn right, ask directions to Buck and Doe lakes. In the same vicinity are Big African and Little African.

Lakes in the back country of East Carroll are Panther, located 17 miles east of Epps, Louisiana, and Van Ransom, six miles east of Epps. The gate to Van Ransom has been closed, however, and permission must be gained to fish this small, shallow, loggy lake. It's one of my favorites for losing top-water plugs, however.

We could name an even hundred more of these little lakes in the state where fishermen catch big strings and tell you some outlandish story about snaring them in the major waterbodies.

Peace and quiet are not things of the past in Louisiana and there'll never be a mad rush to these lakes of the back country. Perhaps it's because laziness goes with fishing and if you don't catch bream you can buy catfish to satisfy the folks at home. The old poem is true: "He cometh home late, smelling of strong drink and the truth isn't in him." Or: "I ask a simple question, the truth I only wish. Are all fishermen liars or do only liars fish?"

Back country bass, bluegill from the cypress knees and saddle-blanket white perch are available in these hidden lakes of Louisiana. More specific directions are available from this end of the line. However, you'll have to be sworn in first.

—Photo by Gresham

This is Van Ransom in East Carroll Parish. If you secure permission to fish here, please take plenty of plugs and some heavy line since the bass here have plenty "go power."

Last Island

Illustration by Eleanor Fairman

By Mel Washburn

It is doubtful if anything can strike terror quicker to the hearts of Louisianians than the threat of a storm. Not even the tragic ravages of disease epidemics have instilled the fear that grips our men and women when they are told that a hurricane is in the offing. And of course there are warnings of every storm today. It was in the earlier days that storms reaped their heaviest toll, when only nature's behavior gave any indication that a sea borne tragedy was on its way.

It was such a storm that desolated one of the gayest and most popular resorts in all Louisiana history—Last Island! Ninety-Eight years ago last July, Last Island, then 25 miles long and about three miles wide, directly south of Terrebonne parish, was the last land on the way to the open sea of the Gulf of Mexico, and the largest of the island group known to the French of South Louisiana as L'Ile Derniere.

Lying nearly 40 miles west of Grand Isle, now the most popular and heaviest populated of all Louisiana's Gulf Coast, Last Island, a hundred years ago was by far the more populated. It was not only the most celebrated island of the group but it was also the most fashionable watering place of the entire aristocratic South. Its beautiful beach resembled the beaches of Grand Isle, Biloxi or Pensacola beaches of today. Its accommodations were of the finest for that day. A charming village of summer cottages faced the Gulf of Mexico near the western end of the island, and there was a hotel, owned by the Muggah brothers, that was as lavish as any establisment of its kind in that day.

The hotel itself was a massive two-story construction of timber, containing many apartments, together with a large dining room and dancing hall. In the rear of the hotel was a bayou where passengers on the boats from the mainland were landed. Village Bayou it was called, but the deep channel which now cuts the island in two did not exist while the village remained.

A storm-lashed sea tore it out in one night. The same night when fields, gardens, cottages, the hotel and all human habitat as well as most of the inhabitants vanished into the sea, leaving Last Island the desolate waste that it is today. There never has been an attempt to restore it to its former place in the life of the luxury-loving Creole aristocracy.

Last Island today is a slowly vanishing outpost of land between Louisiana and the Gulf of Mexico. It is inhabited by the sea birds, fiddler crabs and the memories of a once happy island colony of vacationers.

Visitors today occasionally come across a piece of rotted timber, a broken or moulded brick, or pieces of the skeleton ribs of the steamer "Star", the last ship to reach Last Island before it was wiped clean by the hurricane of August 10, 1856. On the night of August 9 the merry hundreds of men, women and children on the island went to sleep peacefully and without qualm. On the morning of August 11 only one living creature was to be found on the island—a cow. How that solitary cow survived the fury of that storm will forever be a mystery.

Survivors, rescuers, newspaper accounts and countless reminiscences have never been able to agree on the death toll, but it is generally accepted that the figure of 320 lives lost is nearest right, with between 40 and 50 saved by the skipper and crew of the "Star", and another score or so rescued from improvised rafts, floating timbers, or the marshy shores of Le Isles Derniere and the shore line of Terrebonne parish.

One of the most gripping tales of what happened to Last Island on that fateful weekend in early August of 1856, has been told by Lafcadio Hern in his book "Chita" which was written in 1889, thirty years after the island catastrophe. That chapter on the hurricane which devastated Last Island to its present day desolation says:

"In 1856, Last Island lay steeped in the enormous light of even such magical days. July was dying;—for weeks no fleck of cloud had broken the heaven's blue dream of eternity; winds held their breath; slow wavelets caressed the bland brown beach with a sound as of kisses and whispers. To one who found himself alone, beyond the limits of the village and beyond the hearing of its voices, the vast silence, the vast light, seemed full of weirdness. And these hushes, these transparencies, do not always inspire a causeless apprehension: they are omens sometimes—omens of coming tempest. Nature, — incomprehensible Sphinx!—before her mightiest bursts of rage, ever puts forth her divinest witchery, makes more manifest her awful beauty . . .

"But in that forgotten summer the witchery lasted many long days,—days born in rose-light, buried in gold. It was the height of the season. The long myrtle-shadowed village was thronged with its summer population;—the big hotel could hardly accommodate all its guests; — the bathing-houses were too few for the crowds who flocked to the water morning and evening. There were diversions for all,—hunting and fishing parties, yachting excursions, rides, music, games, promenades. Carriage wheels whirled flickering along the beach, seaming its smoothness noiselessly, as if muffled. Love wrote its dreams upon the sand . . .

"Then one great noon, when the blue abyss of day seemed to yawn over the world more deeply than ever before, a sudden change touched the quicksilver smoothness of the waters — the swaying shadow of a vast motion. First the whole sea-circle appeared to rise up bodily at the sky; the horizon-curve lifted to a straight line; the line darkened and approached,—a monstrous wrinkle, an immeasurable fold of green water, moving swift as a cloud-shadow pursued by sunlight. But it had looked formidable only by startling contrast with the previous placidity of the open: It was scarcely two feet high;—it curled slowly as it neared the beach, and combed itself out in sheets of woolly foam with a low, rich roll of whispered thunder. Swift in pursuit another followed—a third—a feebler fourth; then the sea only swayed a little, and stilled again.

"Minutes passed, and the immeasurable heaving recommenced — one, two, three, four . . . seven long swells this time;—and the Gulf smoothed itself once more.

"Irregularly the phenomenon continued to repeat itself, each time with heavier billowing and briefer intervals of quiet—until at last the whole sea grew restless and shifted color and flickered green;—the swells became shorter and changed form. Then from horizon to shore ran one uninterrupted heaving—one vast green swarming of snaky shapes, rolling in to hiss and flatten upon the sand. Yet no single cirrus-speck revealed itself through all the violet heights: there was no wind!—you might have fancied the sea had been upheaved from beneath . . .

"And indeed the fancy of a seismic origin for a windless surge would not appear in these latitudes to be utterly without foundation. On the fairest days a southeast breeze may bear you an odor singular enough to startle you from sleep, a —strong, sharp smell, of fish-oil; and gazing at the sea you might be still more startled at the sudden apparition of great oleaginous patches spreading over the water, sheeting over the swells. That is if you had never heard of the mysterious submarine oil-well, the volcanic fountains, unexplored, that well up with the eternal pulsing of the Gulf-Stream . . . .

"But the pleasure-seekers of Last Island knew there must have been a 'great blow' somewhere that day. Still the sea swelled; and a splendid surf made the evening bathing delightful. Then, just at sundown, a beautiful cloud-bridge grew up and arched the sky with a single span of cottony pink vapor, that changed and deepened color with the dying of the iridescent day. And the cloud-bridge approached, stretched, strained, and swung round at last to make way for the coming of the gale,—even as the light bridges that traverse the dreamy Teche swing open when luggermen sound through their conch-shells the long, bellowing signal of approach.

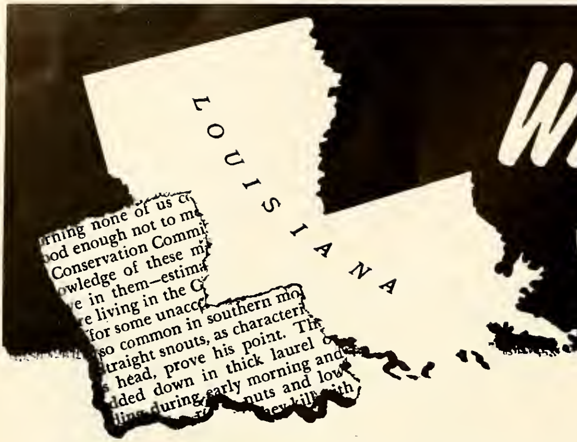
"Then the wind began to blow. It blew from the northeast, clear, cool. It blew in enormous sighs, dying away at regular intervals, as if pausing to draw breath. All night it blew; and in each pause could be heard the answering moan of the rising surf,—as if the rhythm of the sea mounded itself after the rhythm of the air,—as if the waving of the water responded precisely to the waving of the wind,—a billow for every puff, a surge for every sigh.

"The August mornings broke in a bright sky;—the breeze still came cool and clear from the northeast. The waves were running now at a sharp angle to the shore: they began to carry fleeces, an innumerable flock of vague green shapes, wind driven to the despoiled of their ghostly wool. Far as the eye could follow the line of the beach, all the slope was white with the great shearing of them. Clouds came, flew as in a panic against the face of the sun, and passed. All day and through the night and into the morning again the breeze continued from the northeast, blowing like an equinoctial gale . . . .

"Then day by day the vast breath freshened steadily, and the waters heightened. A week later sea-bathing had become perilous: colossal breakers were herding in, like moving leviathan-backs, twice the height of a man. Still the gale grew, and the billowing waxed mightier and faster, and faster overhead flew the tatters of torn cloud.

"The gray morning of the ninth wanly lighted a surf that appalled the best swimmers: the sea was one wild agony of foam,

(Continued on Page 20)



What they're Saying!

C. H. HANCEY, De Ridder Beauregard News . . . Have you been fishing lately? Boy they sho' tearing em' up at the main channel of Annacoco Creek, there has been some of the finest white perch I ever saw come from there this past week.

Annacoco is up and muddy, but they're catching fish just the same. And the fish are full of eggs. It's a shame the dam is not there so these fish could raise another six million fish, more or less.

I saw a picture in the Lake Charles Press of two deer and twenty-one ducks that were killed at nite. The fellows were caught and I wonder what if anything will be done about it. I would hate to face the Judge cause those ducks are "Federal Business." I would love to be the Judge on anybody that kills deer at night, ain't it so?

* * * *

RUSTON LEADER . . . The Grambling work unit of Soil Conservation Service received 10,000 bicolor seedlings from the Louisiana Wildlife and Fisheries Commission.

These bicolor seedlings are made available by the Louisiana Wildlife and Fisheries Commission in cooperation with the Soil Conservation Service.

Bicolor is used primarily as a source of food for quail during the winter and spring months when other sources are not available. It is generally planted in a combination field border with lespedeza serecia, the latter providing cover and some food.

Bicolor seedlings have been distributed to the farmers, according to Leon F. Blankenship, work unit conservationist.

* * * *

PAUL KALMAN, New Orleans Item . . . Those reports we've been carrying on Lake Penchant have resulted in a flood of inquiries from people seeking information on the bass fishing fairyland in Terrebonne Parish. Here's the dope in a nutshell.

Lake Penchant is a body of fresh water situated in a remote area of marsh about 15 miles due south of Houma. Getting there involves a boat ride of roughly 12 miles, beginning from Theriot, a small settlement near Houma.

No rental boats are available, and the sportsman must provide his own transportation. This time of year, you can reach the lake either by entering through a narrow canal or by pulling over an earth dam at the Superior Oil Company canal farther south.

Anglers visiting Penchant for the first time should equip themselves with a chart of the terrain. The route begins at Theriot, and works down through the Falgout canal to Lake DeCade.

The narrow canal mentioned above enters Lake DeCade on its northwest shore about midway down the lake, and is marked by a white sign. There is a mud reef at the entrance to the canal and at low tide it is sometimes necessary to pull the boat across.

* * * *

NEW IBERIA DAILY IBERIAN . . . A conservation expert predicted today that little can be expected in the way of national conservation legislation this year from Congress and added that lawmakers still operated on a "hit-and-miss" basis in this important field.

The prediction came from a report prepared for delegates attending the 21st annual North American Wildlife Conference in New Orleans by E. H. Taylor, retired executive of the Curtis Publishing Company, Philadelphia.

"We are still proceeding on the same old hit-and-miss basis, with action dictated largely by emergencies and political consideration rather than by foresighted planning and policy."

* * * *

BATON ROUGE STATE TIMES . . . A Florida Game and Fresh Water Fish Commission official said in a talk in New Orleans yesterday there should be less federal regulation and more state regulation in waterfowl management.

W. B. Chamberlain Jr., chief of the Florida commission's management division, said the present situation demands continental waterfowl management must be a joint matter in which the states have an essential role.

Chamberlain, speaking at the closing session of the North American Wild Life Conference, said there should be more state regulation because most of the activities connected with waterfowl management are left up to the states to carry out.

* * * *

LAFAYETTE DAILY ADVERTISER . . . The North American Wildlife Conference will devote most of its closing session to ways of getting nations to work together in waterfowl management.

W. Winston Mair of Ottawa, Ontario, chief of the Canadian Wildlife Service, will discuss what Canada can do in the program.

E. B. Chamberlain Jr., of Tallahassee, Florida, chief of the game division of the Florida Game and Fresh Water Fish Commission, will list some of the things the United States must do.

Others taking part in the program include Harry D. Ruhl of Lansing, Michigan, chief of the division of game, Department of Conservation, and James W. Kimball, director of the fish and game division of the Minnesota Department of Conservation.

* * * *

JENNINGS DAILY NEWS . . . Next Thursday, as if you could forget, the Game Preserve opens. And I predict some whoppers will be weighed in that day. Plenty of open water in the Big Pool. In fact it almost looks like a lake. A cloudy day and a light breeze could make for some wonderful fishing there.

All you need is your State fishing license. Same rules as to creel limit and methods of taking as prescribed by State laws are in effect there too.

Just be doubly careful when you pull your boat over the levee that you remove every trace of water grass. That's the baby that Manager Claude Lard and his boys are fighting.

No boat may be left in the Preserve over nite. And don't bring any kind of firearm with you. Those are Federal regulations that will be strictly enforced.

* * * *

BATON ROUGE MORNING ADVOCATE . . . The Louisiana jumbo bullfrog is out in all his glory these nights along our bayous and in the ditches and swamp bottom lands. Frog season is open ten months in the year—only April and May are closed.

This is the time of year to get 'em—March is the finest frogging month of the year. We can't use a gig or shoot 'em, for any device that breaks the skin is ruled illegal. Reason—if you injure a frog the mortality rate is very high. The idea is to take 'em whole and alive or miss 'em clean, so that those that get away can go on with the business of reproducing their kind and keep our gumbo level right up to snuff.

Legal means of taking frogs are—pickin' 'em up with your hands, netting 'em with a long handled dip net, or using a grab. The grabs we've seen locally however have some mighty sharp points and there's no doubt in our mind they'd puncture the skin of the frog. File 'em off a bit? Well, if you want to, but our suggestion is to take a net and turn it over on those fellas out on the bank, but you'll have to make a grab with your hand for those without any land under 'em. Smother 'em like chicken—in the skillet, mmmm—better'n chicken.

* * * *

ARTHUR VAN PELT, New Orleans Times-Picayune . . . Difficult to explain, yet notable in the extreme, are the variations in local weather conditions on the two sides of the Mississippi Delta at approximately the same time. Calm, bright weather may prevail off the east side of the big river channel while westward, only a few miles, rain and squalls may be holding all boats in harbor.

Louisiana's delegation in Congress and the Senate, is combining forces to create an eight-state federal program for the destruction of water hyacinths, alligator weed and other marine pestiferous plants which are hindering navigation, hampering the wildlife effort and playing hob in general with natural drainage in many sections of the south.

Bills have been introducted by Sen. Russell Long, and also by Reps. Edwin Willis and T. A. Thompson of Louisiana, to assist in putting through action which would provide for a five-year program costing $1,250,000 annually and would give the Corps of Engineers authority to destroy the noxious plants in Louisiana, Mississippi, North and South Carolina, Florida, and Alabama and Texas.

* * * *

JERRY BREAUX, Baton Rouge State-Times . . . Living up to its reputation as one of the best all-weather, all-year-'round fishing spots in this country the "big Horseshoe" rolls right along.

On the windy days when whitecaps whip across some parts of it there will be a calm lee bank; and along these banks you'll find the wade fishermen going at it, taking bream out of the weeds. The best of this is over now that it's dropped a bit you'll find waders and boaters alike working the shoreline from Triple Arch to the Lighthouse. They've been catching some nice ones too.

Officials of the Ethyl Recreation Assn. have set the dates of their big fishing rodeo which is to be held on False River only this year. The dates are 12:01 A.M. June 2 through 8 P.M. June 8.

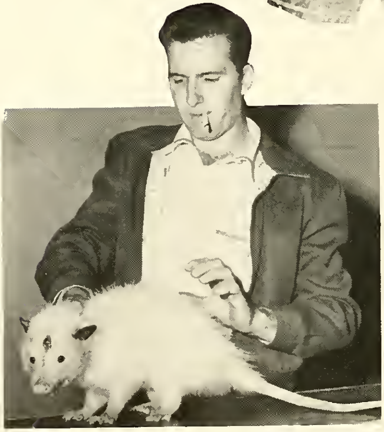
Weighing stations for the ERA affair will be Tropical Gardens, The Lighthouse and the Island Queen.

False River fish will have just four hours to rest up before they'll be in line for another going over when Solvay runs its rodeo starting at 12:01 A.M. June 9 to 12 midnight June 15. Weighing stations for Solvay's rodeo are Tropical Garden, Bizette's and Anchor Inn. ★

Geese leaving Louisiana marsh country for their nesting grounds in Canada. Improvement of the refuge areas in southwest Louisiana has meant the return of more geese to their wintering quarters —Photo by Webert

"Pictures from th

Big fish and big smile to match. This 5-lb., 9 oz. beauty caught at Beaulah Roads recently by Edgar Chaney, Jr., of Jeanerette.



Gene Livingston of Lake Charles exhibits white 'possum caught by him and Dave Doucett.

Nine-point 135-pound field-dressed buck killed by Sherman Huffman of Pineville in Catahoula parish on December 27, 1955. The weapon was a .30 caliber.

Elvis Faulk of Crow
ley with partially c
gested catfish tak
from stomach of ga
fish. Gar weighed
pounds and harpoon
in English Bayou. .

David Landrave, Dudley Foreman and Gerald Gerami, all of Lafayette, with 150 speckled trout taken at Grand Isle in August 1955.

Bill Andrus, 7, son
Lloyd C. Andrus of L
his first kill—two mal

Norco-ites Percy Alleman, Normal Hymel, Chuck Plomteaux, Omere Alleman, Stanley Adams and Kirby Giroin with result of a rabbit hunt last fall with six beagles.. ...

H. L. Searcy of Shreveport with 295-pound eight-point buck killed December 10, 1955 in Avoyelles parish, near Natchitoches bayou.

Readers"

lenry Soil-
au, age 12,
f Palmetto,
ith his
hird bobcat
illed with
is .410
auge.

John Slaughter and Burton Lightfoot of Negreet with string of fish caught January 8 on Sabine River.

T. J. Settoon and W. H. Shilling of Denham Springs exhibit beaver pelts. Mr. Shilling caught 19 during the trapping season.

Twenty-three bass from the E. J. Milton farm in Tangipahoa parish.

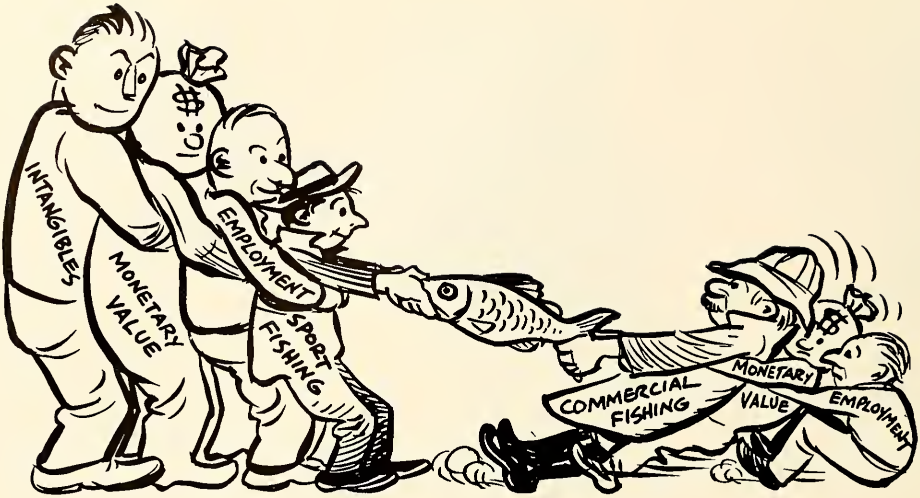
T. F. Jones, Jr., Monroe, J. D. Littleton and Herbert Henry, both of West Monroe, with 11 mallards killed in Wham Break on opening day, 1955.

r. and Mrs.
harles holds

Johnnie Reine, Gonzales, with largemouth bass, four pounds plus, 21¾ inches in length, caught in Lauridge swamp, Ascension parish in May 1954.

String of bass from reservoir near Jones, La., caught by Dealton Guice (right) of Jones. With him are Donald Guice and Latheyl Arnderal.

Mr. and Mrs. Ben F. Hynum of Baton Rouge with string of 54 bass and white perch. Proves winter fishing pays in Louisiana.



FISH CONSERVATION FUNDAMENTALS

PART 7 --- USING THE TOOLS

by Dr. R. W. Eschmeyer

Up to this point we have discussed, briefly, the general fish conservation picture, and the use of the five major fish management tools. In those states where these tools are used wisely, fishing appears to be improving instead of continuing down-hill as pressure increases. The problem seems to be one of being able to use the tools effectively and of making them constantly more useful.

INCREASED KNOWLEDGE

A look at these five management methods tells an interesting story. We were frequently off base on stocking—until research brought us to our senses. Even then, we still had the problem of bringing about a change in public concepts, an admittedly difficult problem.

Many of our regulation practices were ineffective or did more harm than good—until fact-finding came along to point out our errors and put the regulation matter on a sounder basis. Then came the problem of educating the public to realize that more and more restrictive regulations and ever-increasing numbers of wardens might not be the answer.

Habitat improvement and population manipulation have both developed as usable tools because of research.

In the extremely important activity of creating more fishing water, we were faced with the problem of learning how to manage small ponds and lakes, and the very complicated problem of learning something about fish management in big reservoirs. Here, too, education enters into the picture. For example, farmers needed to learn many things about their newly acquired aquatic pastures before they could learn to handle them intelligently.

SELLING THE FACTS

Basic fish conservation has progressed, then, because of two items—research and education. Its future depends on expansion of these same two items.

This situation is not unique, it parallels development in other fields of science. Medicine has made immense strides; the average life expectancy has been rising constantly and impressively. Why? Because medical research has pointed the way to better diagnosis and more effective remedies, and because our health-education programs have caused public enlightenment. The change in farming methods and crop production can be attributed to these same items—research and education. A look at other sciences tells the same story.

There's a third item in all instances—professional standards. The specialists must know how to use the tools, how to get the proper facts, and how to educate the public in sound programs. The best of medical research would do us little good if we were to have a "quack" treat our ailment.

Research and education will be discussed separately, later, but a few points which concern both will be mentioned here very briefly.

In both these important matters, progress depends partly on the amount of money available for the programs. But it depends very much, too, on the caliber of the people who handle those programs.

It might be indicated, too, that in one respect the two activities, research and education, are inseparable; the one can't be effective without the other. Facts are of little value until the public accepts them; education, without basic facts provided by sound research, may be miseducation and may do more harm than good.

DILEMMA

One extremely important question is this: If these two items will determine the future of our fishing, why don't they receive high priority, if not top priority, in some of our states? Why are there still states which do little research or conservation education, or none at all?

We don't know the complete answer, but that shouldn't prevent speculation on the matter. And, it should be stated, first, that a considerable number of states now have big and growing research and education programs. We've made decided progress in both, especially in research because of the availability of Dingell-Johnson (federal aid) funds.

Several groups enter the picture: (1) the researchers and educators themselves; (2) the administrators; (3) the commissions; (4) the legislatures and, in some instances, the governors; (5) the sportsmen; (6) the colleges and universities; (7) the press. There are probably others, but these seven stand out.

Where rapid progress is made we can sometimes attribute it to one of these groups, sometimes to a number of them. Likewise, where the state is not progressive in fish conservation, one or more of these groups is usually responsible.

There was the fishery administration, for example, which had no use for researchers. Its interest seemed to be centered on building more and more hatcheries. A student took graduate work in this state, and took it in fisheries even though this was unusual at the institute in question. His doctorate problem led him in contact with a number of sportsmen's organizations in the general area. The sportsmen not only cooperated, they learned to recognize the importance of research. The biologist was put on the state fishery staff—perhaps because this had become the proper thing to do from a public relations standpoint. This state administration has tolerated a trained fish man ever since. Here, the campus, the local sportsmen, and the biologist, collectively, paved the way to progress.

Of course, there are instances, too, where biologists have had ample opportunity to do a good job, but where they muffed that opportunity for one reason or another.

There are a few instances where the administrator is the key bottleneck, and in a few instances the commission is the damper to progress. But, we also know of many administrators and commission members who have pushed for fact-finding and education, even though this made their own jobs more difficult and more precarious.

Most interesting has been the impact of organized sportsmen on the matter. We know of several instances where they, through wise leadership, took extremely backward situations, conservation-wise, and modernized them. This was done simply by effective, specific, and organized demand to the state legislatures and the governors. The groups made it politically unwise for the elected public servants to do other than pave the way for improvement. We had an opportunity to watch one of the developments at close range over a period of several years; it was an interesting observation.

Of course, we have organized sportsmen in our least progressive states as well as in the most progressive ones. The mere presence of such a group, even a big one, does not necessarily assure progress.

As for the campus, it has greatly aided conservation research and education in some states. It has been of little or no value to these programs in others.

In some states, an individual far-sighted outdoor writer may have been the key figure to progress. And, we still have a very few writers who display a strong dislike for any program involving professionally trained conservationists, regardless of the merits of the program.

FUTURE PROGRESS

Most progress is made where all or nearly all of the above-mentioned groups work for improvement. The states least likely to progress would be those with few research and education men (and with these few poorly qualified for the job), with administrators who don't want progress, with commissioners whose main interests may be political, with a legislature which exercises complete control over the fish (and game) program, with organized sportsmen having a weak or self-seeking leadership, and with the campuses of the state uninterested in fishery research or conservation education. Fortunately, you can count the states which are in this completely unprogressive situation on the fingers of one hand—even after cutting off some of the fingers.

Actually, interest in research and education has been growing rapidly and more funds are becoming available. In fact, there are instances where this rapid change has created an interesting problem—where the biologists or educators, after long periods of crying for more funds, were not prepared to use these added funds as intelligently as they might have, once the money became available. This was especially true when Dingell-Johnson (federal aid) money rather suddenly made greatly enlarged research programs possible.

Though the research and education picture is a bright one, an important aspect of it is not encouraging. As mentioned earlier, the caliber of the personnel is extremely important. This, in turn, will generally be determined by such factors as salary, opportunity for advancement, and security. But, in research, after about five years of college training, the fishery biologists can expect only a low salary. Annual pay for these men on federal aid programs, as of 1953, averaged only $3,900. Too, the work has its unpleasant moments from a public relations standpoint, though in many states this aspect is improving.

If our all-important activities of research and education are to improve constantly, such matters as improved salaries must have serious consideration.

Any discussion of commercial fishing, if it says anything at all, is certain to draw disapproval from one group or another. It's one of the subjects on which people are highly opinionated. Actually, in theory, there seems to be little reason for dispute on the general issue. The arguments center around the desirability of commercial fishing on individual waters or for individual species.

The question of whether sport fishing or commercial fishing should have prior consideration can best be answered by determining which of the two is of greater value to the owners of the fish—the public. This question can be answered very easily from a monetary standpoint, less easily from the standpoint of intangible values.

Insofar as use of the fish for food is concerned, most edible fish are eaten—whether taken by sport fishing or by commercial gear—so this question doesn't enter the picture.

MONETARY VALUE

Monetary values of commercial fish, at retail prices, are easy to get. All you need to do is check the prices at the store or the fish market. The value of fish taken by the sport fishermen is not so easily determined, but a number of figures are now available.

A publication recently received shows values for 119 miles of Madison River in Montana, as determined in a fishermen-expenditure study made by the U. S. Fish and Wildlife Service. Two reservoirs on the river are included. The estimated figures for the period 1950 to 1952, in average expenditures per pound of fish caught by anglers, are: Lower Section $3.31, Madison Reservoir $3.47, Middle Section $3.39, Upper Section $7.97, Hebgen Reservoir $8.21.

Other angling figures, reported in past issues of the *Bulletin*, are these, all from studies made by the Fish and Wildlife Service: Lake Maloney (Nebraska), $1.23 per pound; Republican River (Nebraska and Kansas), $2.42 per pound; Pathfinder Reservoir (Wyoming), $3.94 per fish; Alcova Reservoir (Wyoming), $5.39 per fish; Fremont Canyon, $4.61 per fish. On a section of North Fork Sun River, and several associated waters, expenditures per pound of fish averaged $7.41; on Deerfield Reservoir in South Dakota the average per pound was $3.64. On a 5.5-mile stretch of North Platte River in Wyoming, bank fishermen spent $8.13 per pound of trout, boat fishermen, $7.83. On West Gallatin River in Montana average fisherman expenditures amounted to $5.00 per pound of all fish taken.

The California fish and game department has released figure on the value of fishing for striped bass, salmon, and steelhead in 1953. Average of expenditures by California anglers to catch a striped bass was $13.65 (average cost per pound, $3.03). For a salmon it was $16.85 (average cost per pound, $1.40). For a steelhead it was $28.26 (average cost per pound, about $5.60).

According to a study sponsored by the Sport Fishing Institute and conducted by the Maryland department of research and education, the value of sport fishing in Maryland waters of Chesapeake Bay was $9,606,000 in 1952. This department has estimated that 3,388,000 pounds of fish were taken in 1952 by hook and line in Maryland waters of the Chesapeake and Atlantic Ocean combined. For the

Chesapeake Bay, then, the average value of each pound of fish taken by sport fishermen is something over $3.00.

It is quite evident that the angler pays far more for the pleasure of catching a fish than the "meat" value of that fish.

INTANGIBLE VALUES

The intangible values of commercial fishing are limited. In sport fishing they are immense, for both adults and young folks. "Keeping up with the Joneses" has become a complicated affair. The need to relax—to get away from it all—grows constantly as our civilized way of life becomes more complex. For millions of Americans, fishing is the favorite form of relaxation. Angling is no longer a dignified way of doing nothing—it's a tonic for frayed nerves.

EMPLOYMENT

Chief argument advanced for commercial fishing is that it furnishes employment. But, here again, sport fishing furnishes immensely more employment, and to people in a wide variety of occupations. Assuming that the average angler spends at least $50 per year on fishing, the expenditure for boats, motors, transportation, special clothing, bait, tackle, and the other items involved, adds up to well over one billion dollars per year. We don't know how many people are given employment by sport fishing but the number is not small.

The argument that commercial fishing must not be restricted because it will cause unemployment, is hardly worth discussing. We "restricted" market hunting, without regard for the employment question. Each time we buy a new car we completely ignore the fact that some mighty nice folks were put out of work by shifting from horse and huggy to the horseless carriage. The blacksmiths, buggy-whip makers, harness workers, and wagon builders all took a whipping. Changing conditions call for changes in employment.

ADDING IT UP

The commercial vs. sport fishing question adds up to one answer: **If fish supplies are not adequate for both kinds of fishing, then the sport fishery must have first consideration.** Where the two are in direct conflict, sport fishing must have priority. Basically, the question is no different from the sport hunter vs. the market hunter problem, which was solved some years ago.

With this point firmly established (we hope), where does commercial fishing fit into the picture? It fits in wherever it does not seriously interfere with sport fishing and, of course, in those many instances where it helps sport fishing.

Fish of desirable species for angling are sometimes present in big enough quantities to serve both sport and commercial fishing. A good example was the Ohio fishing during the past year on Lake Erie. Sport fishermen had excellent success on walleyes and perch. Yet the commercial fishermen did so well that they tended to glut the market.

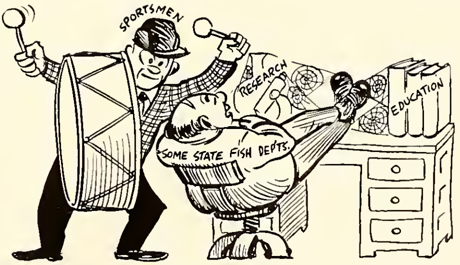
Many fish species are of little interest to sport fishing. Yet, these fish may compete seriously with more desirable fishes. Removal of the less desired species can be expected to benefit sport fishing.

We discussed the importance of controlling rough fish in an earlier article on population manipulation. There are actually many instances where we couldn't have good sport fishing if rough fish weren't controlled by commercial gear. Moon Lake, in Mississippi, is an excellent example. Here, some few years ago, local sportsmen insisted that the lake be closed to commercial fishing. They were unable to get the support of the fish and game authorities, but they nevertheless were able to get a special bill passed by the legislature outlawing this fishing. Sport fishing soon started to decline, and continued to do so, as had been anticipated by fishery workers. Finally, the law was repealed, the lake was heavily fished with commercial gear, under close supervision of a state fishery worker. Angling improved on Moon Lake as a result of this activity.

We realize now that on some waters certain species must be harvested if we are to have good fishing for other species.

THE PROBLEM

As mentioned earlier, in theory the problem of sport vs. commercial fishing is a fairly simple matter. The fish are worth far more, in both tangible and intangible values, when taken by sport fishing. So, where fish supplies are inadequate for both kinds of fishing, the commercial fishing must give way to angling. To us, that's the answer, theoretically.



In practice, there are complications. Just where shall commercial fishing be permitted? And to what extent? These are questions which must be answered locally — by down-to-earth fact-finding programs. There are no simple, general over-all answers to them. ★

(Continued from Page 11)

the gale was rending off the heads of the waves and veiling the horizon with a fog of salt spray. Shadowless and gray the day remained; there were bursts of lashing rain. Evening brought with it a sinister apparition, looming through a cloud-rent in the west—a scarlet sun in a green sky. His sanguine disk, enormously magnified, seemed barred like the body of a belted planet. A moment, and the crimson spectre vanished; and the moonless night came.

"Then the wind grew weird. It ceased being a breath; it became a voice moaning across the world, — hooting, — uttering nightmare sounds. From the northwest the breakers of the bay began to roll high over the sandy slope, into the salines;—the village bayou broadened to a bellowing flood . . . So the tumult swelled and the turmoil heightened until morning,—a morning of gray gloom and whistling rain. Rain of bursting clouds and rain of windblown brine from the great spuming agony of the sea.

"The steamer Star was due from St. Mary's that fearful morning. Could she come? No one really believed it,—no one. Nevertheless men struggled to the roaring beach to look for her, because hope is stronger than reason . . . .

"In those Creole islands, the advent of the steamer was the great event of the week. There were no telegraph lines, no telephones; the mailpacket was the only trustworthy medium of communication with the outer world, bringing friends, news, letters. The magic of steam had placed New Orleans nearer to New York than to the Timbaliers, nearer to Washington than to Wine Island, nearer to Chicago than to Barataria Bay. And even during the deepest sleep of waves and winds there came bedtimes to sojourners in this unfamiliar archipelago a feeling of lonesomeness that is a fear, a feeling of isolation from the world of men,—totally unlike that sense of solitude which haunts one in the silence of mountain-heights, or amid the eternal tumult of lofty granitic coasts: a sense of helpless insecurity. The land seems but an undulation of the sea-bed: its highest ridges do not rise more than the height of a man above the salines on either side;—the salines themselves lie almost level with the level of the flood-tides;—the tides are variable, treacherous, mysterious. But when all around and above these ever-changing shores the twin vastnesses of heaven and sea begin to utter the tremendous revelation of themselves as infinite forces in contention, then indeed this sense of separation from humanity appals . . . . Perhaps it was such a feeling which forced men, on the tenth day of August, eighteen hundred and fifty-six, to hope against hope for the coming of the 'Star', and to strain their eyes towards far-off Terrebonne. 'It was a wind you could lie down on,' said my friend the pilot.

"'Great God!' shreiked a voice above the shouting of the storm,—'she is coming!' . . . . It was true. Down the Atchafalaya, and thence through strange mazes of bayous, lakelets, and passes, by a rear route familiar only to the best of pilots, the frail river-craft had toiled into Caillou Bay, running close to the main shore;—and now she was heading right for the island, with the wind aft, over the monstrous sea. On she came, swaying, rocking, plunging,—with a great whiteness wrapping her about like a cloud, and moving with her moving,—a tempest-whirel of spray;—ghost-white and like a ghost she came, for her smoke-stacks exhaled no visible smoke—the wind devoured it! The excitement on shore became wild;—men shouted themselves hoarse; women laughed and cried. Every telescope and opera-glass was directed upon the coming apparition; all wondered how the pilot kept his feet; all marvelled at the madness of the captain.

"But Captain Abraham Smith was not mad. A veteran American sailor, he had learned to know the great Gulf as scholars know books by heart: he knew the birthplace of its tempests, the mystery of its tides, the omens of its hurricanes. While lying at Brashear City (now Morgan City) he felt the storm had not yet reached its highest, vaguely foresaw a mighty peril, and resolved to wait no longer for a lull.

"'Boys,' he said, 'we've got to take her out in spite of everything!' And they 'took her out.' Through all the peril, his men stayed by him and obeyed him. By mid-morning the wind had deepened to a roar,—lowering sometimes to a rumble, sometimes bursting upon the ears like a measureless and deafening crash. Then the captain knew the 'Star' was running a race with death.

"'She'll win it,' he muttered;—'she'll stand it . . . . Perhaps they'll have need of me tonight.'

"She won! With a sonorous steamchant of triumph the brave little vessel rode at last into the bayou, and anchored hard by her accustomed restling-place, in full view of the hotel, though not near enough to shore to lower her gang-plank . . . . But she had sung her swan-song. Gathering in from the northeast, the waters of the bay were already marbling over the salines and half across the island; and still the wind increased its paroxysmal power.

"Cottages began to rock. Some slid away from the solid props upon which they rested. A chimney tumbled. Shutters were wrenched off; verandas demolished. Light roofs lifted, dropped again, and flapped into ruin. Trees bent their heads to the earth. And still the storm grew louder and blacker with every passing hour.

"The Star rose with the rising of the waters, dragging her anchor. Two more anchors were put out, and still she dragged—dragged in with the flood,—twisting, shuddering, careening in her agony. Evening fell; the sand began to move with the wind, stinging faces like a continuing fire of fine shot; and frenzied blasts came to buffet the steamer forward, sideward. Then one of her hog-chains parted with a clang like the boom of a big bell. Then another! . . . Then the captain bade his men to cut away all her upper works, clean to the deck. Overboard into the seething went her stacks, her pilot-house, her cabins,—and whirled away. And the naked hull of the 'Star', still dragging her three anchors, labored on through the darkness, nearer and nearer to the immense silhouette of the hotel, whose hundred windows were now all aflame.

"The vast timber building seemed to defy the storm. The wind, roaring round its broad verandas, — hissing through every crevice with the sound and force of steam, —appeared to waste its rage. And in the half-lull between two terrible gusts there came to the captain's ears a sound that seemed strange in that night of multitudinous terrors . . . a sound of music!

"Almost every evening throughout the season there had been dancing in the great hall;—there was dancing that night also. The population of the hotel had been augmented by the advent of families from other parts of the island, who found their summer cottages insecure places of shelter: there were nearly four hundred guests assembled. Perhaps it was for this reason that the entertainment had been prepared upon a grander plan than usual, that it assumed the form of a fashionable ball. And all those pleasure seekers,—representing the wealth and beauty of the Creole parishes,—whether from Ascension or Assumption, St. Mary's or St. Landry's, Iberville or Terrebonne, whether inhabitants of the multi-colored and many-balconied Creole quarter of the quaint metropolis, New Orleans, or dwellers in the dreamy paradises of the Teche,—mingled joyously, knowing each other, feeling in some sort akin—whether affiliated by blood, connaturalized by caste, or simply interassociated by traditional sympathies of class sentiment and class interest.

"Perhaps in the more than ordinary merriment of that evening something of nervous exaltation might have been discerned,—something like a feverish resolve to oppose apprehension with gayety, to combat uneasiness by diversion. But the hours passed in mirthfulness; the first general feeling of depression began to weigh less and less upon the guests; they had found reason to confide in the solidity of the massive building; there were no positive terrors, no outspoken fears; and the new conviction of all had found expression in the words of the host himself.

"'Il n'y a rien de mieux a faire que de s'amuser!'

"Of what avail to lament the prospective devastation of cane-fields,—to discuss the possible ruin of crops? Better to seek solace in choregraphic harmonies, in the rhythm of gracious motion and of perfect melody, than hearken to the discords of the wild orchestra of storms;—wiser to admire the grace of Parisian toilets, the eddy of trailing robes with its fairy-foam of lace, the ivorine loveliness of glossy shoulders and jewelled throats, the glimmering of satin-slippered feet,—than to watch the raging of the flood without, or the flying of the wrack . . .

"So the music and the mirth went on: they made joy for themselves—those elegant guests;—they jested and sipped rich wines; — they pledged, and hoped, and loved, and promised, with never a thought of the morrow, on the night of the tenth of August, eighteen hundred and fixty-six.

"Observant parents were there, planning for the future bliss of their nearest and dearest; — mothers and fathers of handsome lads, lithe and elegant as young pines, and fresh from the polish of foreign university training;—mothers and fathers of splendid girls whose simplest attitudes were witcheries. Young cheeks flushed, young hearts fluttered with an emotion more puissant than the excitement of the dance;—young eyes betrayed the happy secret discreeter lips would have preserved. Slave-servants circled through the aristocratic press, bearing dainties and wines, praying permission to pass in terms at once humble and officious,—always in the excellent French which well-trained house-servants were taught to use on such occasions.

"Night wore on: still the shining floor palpitated to the feet of the dancers; still the piano-forte pealed, and still the violins sang, — and the sound of their singing shrilled through the darkness, in gasps of the gale, to the ears of Captain Smith, as he strove to keep his footing on the spray-drenched deck of the 'Star'.

" 'Fools!' he muttered,—'a dance! If that wind whips round south, there'll be another dance! . . . But I guess the Star will stay.'

"Half an hour might have passed; still the lights flamed calmly, and the violins trilled, and the perfumed whirl went on. . . . And suddenly the wind veered!

"Again the 'Star' reeled, and shuddered, and turned, and began to drag all her anchors. But she now dragged away from the great building and its lights,—away from the voluptuous thunder of the grand piano,—even at that moment outpouring the great joy of Weber's melody orchestrated by Berlioz: l'Invitation a la Valse,—with its marvellous musical swing!

" 'Waltzing!' cried the captain. 'God help!—God help us all now! . . . The wind waltzes to-night, with the sea for his partner!"

"Oh the stupendous Valse-Tourbillon! Oh the mighty Dancer! One—two—three! From northeast to east, from east to southeast, from southeast to south: then from the south he came, whirling the sea in his arms. . . .

"Some one shrieked in the midst of the revels;—some girl who found her pretty slippers wet. What could it be? Thin streams of water were spreading over the level planking,—curling about the feet of the dancers . . . . What could it be? All the land had begun to quake, even as, but a moment before, the polished floor was trembling to the pressure of circling steps; —all the building shook now; every beam uttered its groan. What could it be? . . .

"There was a clamor, a panic, a rush to the windy night. Infinite darkness above and beyond; but the lantern-beams danced far out over an unbroken circle of heaving and swirling black water. Stealthily, swiftly, the measureless sea-flood was rising.

" 'Messieurs—mesdames, ce n'est rien. Nothing serious, ladies, I assure you . . . Mais nous en avons vu bien souvent, les inondations comme celle-ci; ca passe vite! The water will go down in a few hours, ladies;—it never rises higher than this; il n'y a pas le moindre danger, je vous dis! Allons! il n'y a—My God! what is that?'

"For a moment there was a ghastly hush of voices. And through that hush there burst upon the ears of all a fearful and unfamiliar sound, as of a colossal cannonade—rolling up from the south, with volleying lightnings. Vastly and swiftly, nearer and nearer it came,—a ponderous and unbroken thunder-roll, terrible as the long muttering of an earthquake.

"The nearest mainland,—across mad Caillou Bay to the sea-marshes, — lay twelve miles north; west, by the Gulf, the nearest solid ground was twenty miles distant. There were boats, yes!—but the stoutest swimmer might never reach them now! . . .

"There rose a frightful cry,—the hoarse, hideous, indescribable cry of hopeless fear,—the despairing animal-cry man utters when suddenly brought face to face with nothingness, without preparation, without consolation, without possibility of respite . . . Sauve qui peut!

"Some wrenched down the doors; some clung to the heavy banquet-tables, to the sofas, to the billiard-tables:—during one terrible instant,—against fruitless heroisms, against futile generosities,—raged all the the frenzy of selfishness, all the brutalities of panic. And then—then came, thundering through the blackness, the giant swell, boom on boom!

"One crash! The huge frame building rocks like a cradle, see-saws, crackles. What are human shrieks now? The tornado is shrieking! Another! Chandeliers splinter; lights are dashed out; a sweeping cataract hurls in: the immense hall rises,—oscillates; twirls as upon a pivot, crepitates, crumbles into ruin.

"Crash again! The swirling wreck dissolves into the wallowing of another monster billow; and a hundred cottages overturn, spin in sudden eddies, quiver, disjoint, and melt into the seething.

"So the hurricane passed,—tearing off the heads of the prodigious waves, to hurl them a hundred feet in air,—heaping up the ocean against the land,—upturning the woods.

"And over roaring Kaimbuck Pass,—over the agony of Caillou Bay,—the billowing tide rushed unresisted from the Gulf,—tearing and swallowing the land in its course,—ploughing out deep-sea channels where sleek herds had been grazing but a few hours before,—rending islands in twain,—and ever bearing with it, through the night, enormous vortex of wreck and vast wan drift of corpses. . . .

"But the 'Star' remained. And Captain Abraham Smith, with a long, good rope about his waist, dashed again and again into that awful surging to snatch victims from death,—clutching at passing hands, heads, garments, in the cataract-sweep of the seas,—saving, aiding, cheering, though blinded by spray and battered by drifting wreck, until his strength failed in the un-equal struggle at last, and his men drew him aboard senseless, with some beautiful half-drowned girl safe in his arms. But well-nigh twoscore souls had been rescued by him; and the 'Star' stayed on through it all.

"Long years after, the weed-grown ribs of her graceful skeleton could still be seen, curving up from the sand-dunes of Last Island, in valiant witness of how well she stayed.

"Day breaks through the flying wrack, over the infinite heaving of the sea, over the low land made vast with desolation. It is a spectral dawn: a wan light, like the light of a dying sun.

"The wind has waned and veered; the flood sinks slowly back to its abysses—abandoning its plunder,—scattering its piteous waifs over bar and dune, over shoal and marsh, among the silences of the mango-swamps, over the long low reaches of sand-grasses and drowned weeds, for more than a hundred miles. From the shell-reefs of Pointe-au-Fer to the shallows of Pelto Bay the dead lie mingled with the high-heaped drift;—from their cypress groves the vultures rise to dispute a share of the feast with the shrieking frigate-birds and squeaking gulls. And as the tremendous tide withdraws its plunging waters, all the pirates of air follow the great white-gleaming retreat: a storm of billowing wings and screaming throats.

"And swift in the wake of gull and frigate-bird the Wreckers come, the Spoilers of the dead,—savage skimmers of the sea,—hurricane-riders wont to spread their canvan-pinions in the face of storms; Sicilian and Corsican outlaws, Manila-men from the marshes, deserters from many navies, Lascars, marooners, refugees of a hundred nationalities,—fishers and shrimpers by name, smugglers by opportunity,—wild channel-finders from obscure bayous and unfamiliar chenieres, all skilled in the mysteries of these mysterious waters beyond the comprehension of the oldest licensed pilot.

"There is plunder for all—birds and men. There are drowned sheep in multitude, heaped carcasses of kine. There are casks of claret and kegs of brandy and legions of bottles bobbing in the surf. There are billiard-tables overturned upon the sand;—there are sofas, pianos, footstools and music-stools, luxurious chairs, lounges of bamboo. There are chests of cedar, and toilet-tables of rosewood, and trunks of fine stamped leather stored with precious apparel.

"There are objets de luxe innumerable, There are children's playthings: French dolls in marvellous toilets, and toy carts, and wooden horses, and wooden spades, and brave little wooden ships that rode out the gale in which the great Nautilus went down. There is money in notes and in coin—in purses, in pocketbooks, and in pockets: plenty of it! There are silks, satins, laces, and fine linen to be stripped from the bodies of the drowned,—and necklaces, bracelets, watches, finger-rings and fine chains, brooches and trinkets.

" 'Chi bidizza! —Oh! Chi bedda mughieri! Eccu, la bidizza!' 'That ball-dress was made in Paris by—' 'But you never heard of him, Sicilian Vincenzu.' 'Che bella sposina!'

" 'Her betrothal ring will not come off, Guiseppe; but the delicate bone snaps easily: your oyster-knife can sever the tendon . . . tendon . . . 'Guardate! Chi bedda picciota!" 'Over her heart you will find it, Valentino'—the locket held by that fine Swiss chain of woven hair—'caya manan!'

" 'And it is not your quadroon bondsmaid, sweet lady, who now disrobes you so roughly; those Malay hands are less deft than hers,—but she slumbers very far away from you, and may not be aroused from her sleep.' 'Na quita mo! dalaga!'—'na quita maganda!' . . . Juan, the fastenings of those diamond ear-drops are much too complicated for your peon fingers: tear them out!—"Dispense, chulita!'

"Suddenly a long, mighty silver trilling fills the ears of all: there is a wild hurrying and scurrying; swiftly, one after another, the overburdened luggers spread wings and flutter away.

"Thrice the great cry rings rippling through the gray air, and over the green sea, and over the far-flooded shell-reefs, where the huge white flashes are,—sheet-lightning of breakers,—and over the weird wash of corpses coming in.

"It is the steam-call of the relief-boat, hastening to rescue the living, to gather in the dead.

"The tremendous tragedy is over!"

And thus did Last Island return to the solitudes of a sea-washed strip of land, the last outpost of 'terra firma' between Louisiana and the open Gulf of Mexico; and because of the vivid word picture painted by Lafcadio Hern, the hurricane which returned "L'Ile Derniere" to its original desolation has made that hurricane one of the most remembered by storm harassed Louisiana.

The horror of that tempest has only been surpassed by the tragic death toll that today—97 years later—is still fresh in the memories of the finest families of South Louisiana, whose loved ones were carried to eternity the night that Death played the tune while the wind and the sea waltzed over Last Island, leaving a desolation that has not been challenged since. ★

BANDING WOODCOCK

Louisiana State university wildlife researchers have banded more than 1,300 woodcocks this winter in an effort to learn more about the long-beaked, secretive birds.

Led by Leslie L. Glasgow, assistant professor of forestry, six L. S. U. forest and game management students, armed with headlights and long-handled catching nets searched South Louisiana lowlands for the elusive birds. Among the 1,300 woodcocks they caught, the researchers counted 24 birds banded in the same fields last year, and one woodcock that wore a 5-year-old metal band.

A metal band bearing a number and instructions to notify the U. S. Wildlife Service in Washington, D. C., was attached to each bird's leg. The woodcocks were then released.

Professor Glasgow said woodcock banding was made possible by a $900 grant from the Wildlife Management Institute of Washington, D. C., a private organization interested in studies of wildlife and game. The L. S. U. Agricultural Experiment Station sponsored the project.

Woodcock fields were spotted from the air and land, and the locations marked. The researchers proceeded at night to capture the birds by blinding them with headlight beams and throwing nets over them.

Banding operations were conducted between the Mississippi River and the Atchafalaya swamp country, at Spanish Lake, in the vicinity of Baton Rouge, and other locations.

Each year, Professor Glasgow estimates, nearly 80 per cent of the woodcock population of North America spends the winter in Louisiana. The reasons for their coming: Louisiana's warm climate, abundant earthworms, and the excellent protective cover woodcock find in Louisiana's wetlands.

During the last six years Professor Glasgow and his assistants have banded nearly 6,000 woodcocks. Some of them have been recovered in mid-Western and Eastern States and Canada.

A veteran wildlife researcher, Professor Glasgow in 1953 received the Southeastern Wildlife Society award for his study of the woodcock.

The six students who helped Glasgow are: Robert Henson, Ridgeland, Miss.; Robert Chabreck, Lacombe; Fred Jordan, Bassfield, Miss.; Robert Blaycock, and Arden French, both of Baton Rouge, and Charles V. Whatley, Trout. ★

TIME TO REMEMBER

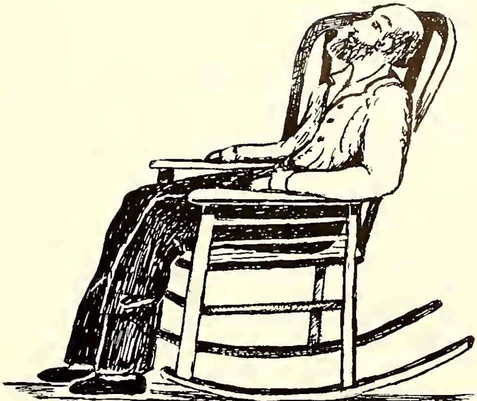


Illustration by Eleanor Fairman

New Orleans, Louisiana.
Dear Sir:

Permit me to add my congratulations upon your receipt of the well-deserved "honorable mention award" recently, placing yours among the top-ranking publications of its kind in the country, as adjudged by the largest association of its character in the United States.

Incidentally, permit me to identify myself as one of the diminishing group of old-timers, (am in my ninetieth year) who are deprived either through infirmity, or lack of opportunity, from actual participation in such outdoor sports as hunting or fishing; but do, however, enjoy reading about these activities as well as other wild nature subjects as treated by you so ably in the "Louisiana Conservationist".

John Blanchard's excellent story, "The Last of the Bearhunters", proved most interesting, interspersed as it was with the piquant utterances in the vernacular, by old-timers, which gave an added sense of realism, also, to their hunting incidents of long ago in which they were active participants.

It also sparklighted my memory to a time concurrent in part with the bear-hunting days of the noted hunter, William Rapp Osborn, who you state was born in 1856 and died in 1925; for it was about the year 1889 that as a sub-contractor I was engaged in building a section of a new levee near Lake Providence, La., in East Carroll Parish.

A neighboring contractor had invited me to join him on a deer hunt planned for Thanksgiving Day; and for which he had made arrangements with an old negro, living on the edge of "Mason Bayou", owner of a pack of deer-hounds.

My friend was equipped with a Winchester while I had to be content with my shotgun and a supply of both buckshot and number 8 shells. Upon arrival at the negro's cabin we learned he had not returned from Lake Providence; and his wife upon hearing he had collected in advance most of his promised fee, as a guide and for the use of his hounds, made what proved to be a true prediction, which was to the effect that we would not see her old man this trip as he would drink up his payment as usual before returning home.

She turned over her cabin to us for the night and also secured for us the services of a young negro as our guide, which also seemed to be the customary procedure in that situation.

Our guide suggested a 'coon hunt for the night; and so soon equipped by him with headlamps bearing reflectors designed to shine the eyes of a coon up a tree, or a deer on the ground; and also provided us with rubber boots, hip high; we were shortly on our way, bayou bound.

The swamp through which we were soon wandering was completely covered with water, reaching at times to above our knees; but instead of sinking in soggy mire, the footing proved surprisingly solid, suggesting the area to have been but recently overflowed.

The 'coons, however, proved stubbornly noncooperative, as none deigned to look our way, as our reflectors flashed spotlights along the lower limbs, and between the crotches of the trees; occasionally I swept the lower grounds with the beams in the hope of flashing the eyes of a misguided deer; although it seemed incredible that any of this tribe of so-sensible animals, would be found wandering around in this desolation of water.

Presently, however, my reflector brought into focus two gleaming orbs; fortunately, our guide was beside me and placed a restraining hand on my arm as he whispered, "Don't shoot, there are some cattle out here".

On nearer approach my imagined deer proved to be a disturbed bovine which had just narrowly escaped conversion into beef.

During our return to the cabin our young guide warned us of the danger in our separating, or leaving our stands, on the proposed deerhunt the following morning, due to the possibility of our becoming lost in the uninhabited wilderness known as the "Mason Bayou", in which he said he had been lost for two days and nights the year before.

Relatives and neighbors searching for him carried cowbells, whose ringing he had heard but had become too crazed by fear to go towards them, being under the hallucination the sounds came from evil spirits seeking his destruction.

According to his relation of his wanderings, they probably formed a labyrinth of irregular circles, as he often came upon landmarks he had passed before, and therefore he had probably never penetrated very deeply into the "Bayou".

Eventually one of the bell-ringers had overtaken and led him to safety, although it was weeks before he had fully regained normalcy, and even in his relation to us of his wanderings, the recollection of his fright was again mirrored in his countenance.

The unearthly haunting scream of a panther had frightened him more than anything else he told us, as he had the feeling he was being followed day and night by this most dreaded haunter of the wilds.

Along the fringe of the Bayou in the scattered negro cabins where it was suspected the "Voodoo" art was still practiced and superstition was rife, the panther's eerie cry was the convincing proof that it was the living embodiment of a demoniac spirit.

Panthers had also been known to have killed blacks, going unarmed as they were required to do. Consequently, it would seem that panthers become aware of the fact that the negro was more vulnerable to their attack than were some of their wild animal sharers of the wilderness.

It was but a short time following our intrusion into the wilds of the "Mason Bayou" that I witnessed the return of a group of about 15 young men from a bear hunt in that same district. They were marching down a street in Lake Providence with three bears, each slung midway of a pole resting on the shoulders of two carriers. They carried clubs instead of guns and a bystander explained that guns endangered the hounds as much as the bear in the melee following an attack.

Standing one day on the New Orleans wharf, I was witnessing the loading of 500 mules and about 100 crates of chickens on the Spanish Steamer, "Catalina de Cadiz"; finally as it swung into the current and headed for Havana, heard an old river man exclaim; "no Havana Spaniard will ever put his teeth in those chickens"; and, sure enough, the "Catalina" had barely reached the ocean when one of the two American gunboats awaiting her there fired a shot across her bows and brought her back to New Orleans, the first capture of the war in those waters.

It was, however, the following day when I was across the river in Algiers that the continuous screaming of a boat whistle caused me to run up the side of the high levee for a better view and saw the little tug, "McCullom," passing close by with her whistle evidently tied down. Her captain was announcing: "War is declared against Spain by the U. S.". A bedlam of noise now broke loose on the entire river fronting New Orleans, as every kind of boat added to the din with whistle and siren.

My Uncle Charles Pleasants, a Confederate artilleryman, while at New Orleans during the Civil War, was totally blinded by the premature explosion of a cannon occurring during practice maneuvers and spent the remainder of his life at our home in suburban St. Louis, Mo. Our family forebears go far back in this country, inclusive of such family names as Gentry-Cabell-Horsley-Loving. My Grandfather, Benjah Lingow, was killed in action at Pea Ridge, Ark., while serving under General Sterling Price, as a surgeon. His son, William, was also killed while trying to reach Price's army. Mention this geneology as an added reason why my sentiments as well as convictions favor the Confederate side of the Civil War.

Regarding the Lake Providence Levee, we were finally driven by the rising flood, from the river side of the levee, to the west side of that structure. Here seep water eventually forced its way through the sandy soil, deep below the levee base, and slowly rising in our new borrow pits, drove us further inland from time to time, forcing us to build corduroy roadways for our wheel scrapers, using trees, saplings and even raiding cane brakes for the material.

Our levee top still barely crested the ever rising river when it finally became impossible to get through the rising seep waters with our wheelers which was even being added to by the backwaters from the big "Crevasse" in Concordia Parish.

Now at long last the promised help came from the State Penitentiary, same being a quota of 200 negro convicts, with a complement of 20 guards. Barracks were being hastily constructed, as the convicts were immediately put to work with long-handled shovels digging up earth from beneath the water covering the 40 foot berm adjoining the levee, and filling wheat sacks, which were placed atop the levee, one row in the direction of the levee and another contrawise. A few weeks later the flood subsided and the levee was saved, but I was broke and had to dispose of my 15 mule teams and accompanying equipment which barely met my obligations, and thus here lost my savings for a period of over six years, all swallowed up in the maw of the ruthless river.

Yours truly,

W. A. Burgess
2821 Leavitt St.,
Chicago, Illinois.

CONTINUITY--- *A Must*

By A. C. (Pops) Glassell

Everyone is interested in natural resources. Some of us have an interest because we like to hunt and fish; others derive a living from it, and others just like to see the living plants and animals around us. No matter what your reason for having an interest in the natural resources of the State of Louisiana you have considerable values at stake. These values are constantly changing and because there are many related influences affecting them, you must be ever vigilant to understand these values and the factors affecting them in order that these resources may be protected and used to the greatest advantage for the greatest number of people.

This report is designed to give you who are not as close to the problem as I, a true picture of the tremendous asset you have in your natural resources; what your servants, employees of the Louisiana Wild Life and Fisheries Commission, are doing to help you, and what you as a citizen can do.

Louisiana has a bountiful supply of fish and game but as is the case with every man's budget it is never large enough. The duties of this state agency are to determine what we have in the state; where it is located; what factors are whittling away at it; what can be done to continue the abundance or increase the supply and how may this fish and game supply be used most equitably by the majority of the people yet preserve sufficient numbers to guarantee a continuing supply.

To accomplish the above objectives it is imperative that a sound basic program be formulated and legal machinery established which will guarantee continuity in the program to obtain the desired results. In addition to a sound foundation and a continuous program it is essential to have well qualified, well-paid personnel. He must also have encouragement and a free hand to develop his ideas and plans as long as they are based on sound biological facts. He must be considered as the foundation of your game program if you expect to achieve results from your monies spent in fact finding, game and fish habitat improvement, and game and fish stocking.

Your Commission has followed the edict of the people. We have established a long-range well-planned program that will benefit the greatest number of sportsmen and give you the most for your dollar.

First, we are trying to find out what resources are present in the state, where they are located and what factors are controlling them. To do this it was necessary to secure a sufficient number of trained men and assure them that their job is a profession and not a temporary assignment and that their findings would not be ignored. Secondly, we tried to determine the most pressing problems keeping in mind the long-range objectives. A priority list was established but it is flexible enough to permit adjustments when conditions dictate.

One of the first things that was needed was a closer contact with the sportsmen. This was solved by establishing districts with an established headquarters and personnel who could serve you in your district. In addition to better serving you we have become more efficient as the technical personnel becomes more familiar with the local problems and needs.

A second obvious need was more information on what is happening to game and fish populations. This can be solved only through the study of all factors affecting animal populations and methods of changing or reducing those that are adversely influencing game and fish numbers. We all know that the change from crude farming methods, where many individuals and animals were needed, to mechanical farming resulted in a radical change in the land appearance and the food and cover conditions. This change reduced the food and cover requirements for rabbits and quail to restricted patches and marginal areas heretofore considered poor range. These animals were reduced in numbers in proportion to the total area of suitable range. In the large delta cotton producing areas, the large sugar cane producing area, the rice fields and the clean improved pasture lands, suitable quail range was almost eliminated. Likewise, modern forest practices, the elimination of fire to a great extent and less severe cutting of pine lands, further reduced the benefits of woodlands for quail range. It is evident that the quail range has been squeezed between progress in agriculture and timber management.

As a result of research we can say that all is not lost as far as quail and rabbit management are concerned. We know that by undertaking certain simple practices we can maintain and add to the quail and rabbit habitat. When this occurs the animals will immediately move in and adequately stock the range to its ability to support a population. Just because we know what can be done on a small scale does not imply that our investigation of new and improved methods has stopped. This will continue indefinitely because there will always be a quail and rabbit problem. For example, we know we can plant lespedezas, peas, millets, sorghums and other agricultural crops in small openings throughout the woods and attract quail, but all of these plants are relished by cows and hogs. We are, therefore, studying many native and introduced plants with the hope that we will find one which will grow well when planted, remain a long time, produce an abundant amount of high quality quail food, yet will not be taken by cattle. This will eliminate the cost of annual planting, maintenance and fencing.

A major problem in game management is devising a method to determine what part of the game population can be legally harvested and leave a brood stock. The methods used in the past have been "hit or miss" and based only on shorter seasons and smaller bags. Actually, this is a good tool if used properly but restricting the take has no effect if habitat and food conditions are eliminated. By considering factors annually, we can be assured of a plentiful brood stock yet not waste the game by under harvest which results in dying from old age and never being utilized. It also permits the hunter to remove unproductive individuals that furnish nothing to the population but take up food and space where other animals should be present.

The Commission is carrying on continuous investigations of rabbit, quail, squirrels, deer, doves, waterfowl and other game species to determine their food and cover requirements, production, and breeding periods.

A statewide study of our waters and the fish found in them has shown that a continuous change in the amount and kinds of fish is taking place yearly. There is no indication that this change will cease nor improve to the advantage of the sportsmen. All of you are familiar with the tremendous program in the state that has changed the flow of water, flooding, frequency of overflows and general water control. All of this is a result of increased agricultural and industrial development. We recognize the value of these improvements but they have also resulted in a tremendous change in our fisheries, fur and waterfowl—most adversely.

We have in progress, investigations to determine how these waters may be restored to their former productivity of game fish. As a result of these studies, we know that undesirable rough fish such as shad, gar, carp and others eventually become so abundant that they make up almost all the poundage of fish certain bodies of water will produce. When this happens the sport fish as well as the more desirable commercial species disappear. There is only one way to correct this condition and it is NOT by adding fish raised in hatcheries or from any other source. A body of water will support only a given number of pounds of fish and those already there have the advantage over anything that can be added. The only solution is to remove some of the undesirable kinds so they may be replaced by those we like to catch.

Tools for the management of our waters must vary with the conditions which need altering. One major tool carried out by *Nature* for a thousand years is the fluctuation of water levels due to normal overflows and recessions of water during dry weather. In such areas fish have remained extremely productive and in quality and quantity that are most desirable to both sport and commercial fishermen. When man starts interfering with Nature's methods a balance that has been maintained for many years was upset.

Research carried out in many sections of the country including Louisiana has shown that a planned program of water fluctuation can accomplish what Nature has been doing for years.

The Commission's program for fluctuation is designed to follow somewhat the same procedure *Nature* has been carrying out for years. By drawing the water down during the late summer when both commercial and sport fishing are at a minimum it permits vegetation to grow on the bottom which in turn takes the minerals from the soil. When the area is reflooded in the winter these plants decay and release these minerals which, in turn, fertilize the water for tiny plants and animals which is the stable food of all fry and many of the forage fish. During the low water period those species that are too prolific such as shad and most sunfish are restricted in small areas where the bass and other carnivorous species may easily secure

Nine game management areas, opened to public hunting in 1955, afford hunting grounds for hundreds of sportsmen. These areas, for controlled shooting, permit the harvest of surplus game animals.

them for food. This solves two purposes, furnishes an abundance of food for bass and reduces an overabundance of undesirables which removes competition. A program of this type must, of course, be put into operation only where it is found to be desirable and operated for the greatest benefit that may be received. Normally all reservoirs that have become stable either due to the control of flood waters or artificial impoundments after they have become five or six years old will need a managed fluctuation program if good fishing is maintained.

As a result of investigations, we have found that the removal of certain fish, by seining, immediately increases the more desirable species, the rate of growth and the number you catch. Obviously, it is impossible to seine many of our lakes and streams and even if it could be done the cost would be prohibitive. The Commission is trying to find other methods of accomplishing the same results. Experiments have shown that small bodies of water can more effectively be made to produce good fishing by chemically eradicating *all* fish and restocking from hatcheries with the proper kinds and numbers of fish. Because of the cost this type of renovation is restricted to small lakes. We are continuing our search for cheaper and more effective means of treating lakes. In addition to total eradication, we have found that selective chemical treatment is effective in removing certain undesirable kinds of fish just as seining will do. This method is also too expensive to apply on a statewide scale at the present time.

Drainage, flood control and water control projects have resulted in complete changes in wildlife habitat. Waterfowl and fur animals have felt the influence from these projects. Once, most of the overflow lands were excellent waterfowl habitat, but in recent years it is useful only late in the winter when enough water is present in a few places to attract and hold them. This has resulted in less wood duck breeding range and restricted the winter range, limited hunting to those areas where water and food are found in close proximity. Such areas are becoming fewer each year and naturally the number of hunters who can find a place to hunt is less.

Just as waterfowl had to move out of drained areas, all other animal and fish life depending on water for its home or food supply had to move or die. One basic requirement for both plants and animals is that they must be able to adapt themselves to changes if they continue to exist. Waterfowl can move to new areas provided there is enough food and water present to take care of the needs of all the birds but most other animals cannot move long distances and therefore, when an area becomes uninhabited it reduces the total state population. Even if they were able to move to new range it is usually supporting all animal life that food and cover conditions will permit.

The picture is not as hopeless as it looks but it is definitely having its effects. Qualified men are studying the wetlands of the state to determine their values for wildlife. When these are classified the Commission will manage them for the maximum benefits for those animals it will support. We also study the monetary values and compare it with the values of products that may be produced if it is changed. Only in cases where the wildlife and fisheries values far outweigh other values does the Wild Life and Fisheries Commission attempt to stop the project. Our main efforts are directed toward working with the water control agencies so they can undertake their work with minimum losses to wildlife. This can often be done by minor adjustments in the plans. Often no additional costs are involved.

Do you have a place to hunt? If so, you are fortunate. Most of us can freely hunt certain game somewhere in the state although it may require considerable travel. Good places to hunt are less plentiful for many of us and deer, turkey, and waterfowl hunting is often quite difficult to find. No one appreciates this fact more than the Wild Life and Fisheries Commission. With this in mind the Commission put at the top of its objectives a plan by which hunting areas would be made available to the public. Since at least 80 per cent of all game is produced on private lands and more and more of these private holdings are being posted annually we see only one solution. We are, therefore, acquiring by long term leasing or purchase as much land as possible. The land is obtained for public use and the agreement between the owners and the Commission so states that public hunting will be permitted and no minority group will be able to use it at the exclusion of the general public. In other words, the owners do not feel it would be good public relations to lease large tracts of land to the state to be taken out of public hunting nor for the use of a select few. Neither does the Commission believe it would be good public relations nor good game management.

The Commission is also using its major state-owned waterfowl area for public hunting. The well-known Pass-a-Loutre waterfowl area at the mouth of the river has been developed and managed during the past three years for public use. No one is excluded but because of limited facilities and the demand to hunt, it is necessary to select hunters by a lottery system. During the 1955-1956 season the only year when the area was fully developed 4,954 hunters made application and 1,754 were drawn to hunt.

The Commission has under management 487,280 acres of land which is open for public hunting or will be as soon as a harvestable surplus of game is available. New areas are being added as fast as they can be acquired. Out of the 487,280 acres 257,280 acres are privately owned, 164,000 owned by some public agency and 66,000 belong to the Commission.

Once the land is acquired technical personnel immediately draw up management plans. These plans call for all types of development as needed and hunting regulations. If animals are needed they are trapped in some other area in the state and released. If food and cover are needed this is added only in quality and quantity needed. We may undertake predator control if and where it is needed as indiscriminate predator control may upset Nature's balance in some areas so badly that competitive animals may cause greater damage to the game than predation. Some areas require no development and public hunting is allowed. Such areas are acquired to keep them from being closed to the public.

As soon as a surplus population of any animal is present recommendations for hunting are submitted to the Commission for approval. All areas are open to the public and as few restrictions as possible are affixed. Normally, the only restrictions are those that apply statewide or a shortening of the season. During 1955 approximately 151,000 acres were open to squirrel hunting for the first time in several years. In addition one 4,000-acre tract was open to five days deer hunting where 100 legal deer were taken and the same area was open to 15 days quail hunting. This 40,000 acres furnished hunting for many sportsmen for the first time in many years as a result of planned research and management. Many more acres will be added each year because it is one of the major objectives of the Commission.

We are stocking deer in every favorable range in the state. Naturally, deer cannot be placed in every suitable area immediately. As the trapping program progresses all suitable areas should be well stocked in about three years.

Small waterfowl shooting areas are being developed in many areas over the state. These areas are not only giving hunting where none is present but they help hold birds in a much larger surrounding area.

Demonstration areas are being developed, mainly on forest lands, to improve and attract quail. As a result of these demonstrations many private landowners, sportsmen clubs and at least one Police Jury are undertaking a similar operation under Commission personnel supervision. This practice should increase as more and more quail hunters see the value and how easy and inexpensive it may be undertaken on a small scale. To leave it entirely up to the Commission on a statewide basis would be prohibitive if it is carried out in enough areas—to show noticeable results. We congratulate those who are using this tool to help themselves and encourage others especially wildlife clubs to get into the act.

Nature has a habit of balancing the species. Projects of construction agencies have destroyed the habitat of both fish and game. This area (Atchafalaya Basin) is one of the last frontiers—let's preserve it.

The fish hatchery program is being stepped up for more efficient operation. We should be able to furnish in 1956-1957 proper numbers and kinds of fish for all newly constructed ponds, all ponds that have been rejuvenated and all waters where tests have shown a need. We believe pond renovation by chemical means is a good tool in many areas and the Division will make studies for all who make a request and recommend management techniques. The Commission does not have nor will it ever have the money to do the entire job, but private individuals, clubs and civic organizations and political divisions could serve a public need by participating. A good example was the cooperative program on Cane River to renovate fishing. The results will many times pay the cost.

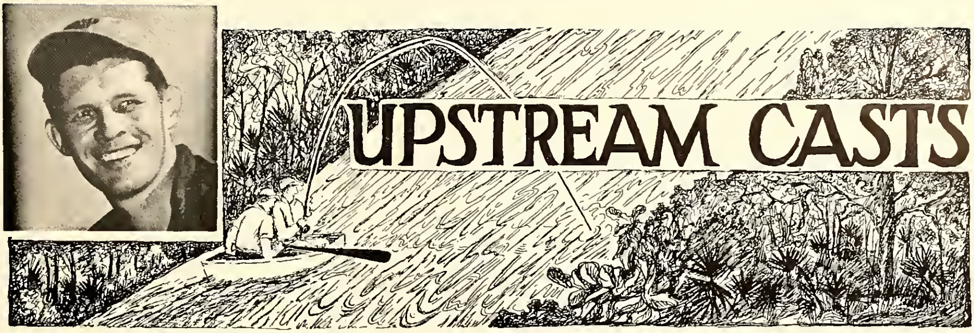
A major menace and problem is the water hyacinth. The Commission is spending no small amount in the control of this enemy to fish, game, transportation, flood control, navigation and drainage. It may never be eradicated but if funds are made available and the well-organized program now underway can be increased manyfold it can be brought under control. It will take money, effort and time.

It is clear that we have tried to establish a fundamentally sound program taking cognizance of the wishes and needs of the sportsmen who pay the bill. Only through your efforts can these objectives be continued uninterrupted.

The question undoubtedly comes to your mind—What can I do as a businessman or sportsman? You can insist on permanent well-qualified personnel for gathering information to furnish your administration for their benefit in establishing regulations. You should recognize the need for such personnel and insist that their findings be followed.

You can insist that your Wild Life and Fisheries Commission get the facts.

Last, but not least, work with your Commission trying to improve it. You will soon find that anyone in the job is only human and he cannot do anything unless he knows from you, the sportsmen, what you want for your money. You should organize and stick together. You can accomplish an awful lot if you will undertake a project of improving a little piece of game or fish habitat with the assistance of your Commission personnel who are willing, able and anxious to help. Their interest is to do a good job for you.



UPSTREAM CASTS

Much interest is created in the periodic section, "Pictures from the Readers," and we've been trying to work off the backlog of photos; however, some of the photographs are not good enough for reproduction. Because of this we've had to pass up some rather interesting shots of people, fish and animals which we'd like to have printed in this magazine. We are interested in securing photos of fishing and hunting activities, strange animals, birds and other phases of wildlife or outdoor recreation. Please send them to us, but we can not be responsible for returning or acknowledging receipt of these photos.

Manuscripts are also accepted by the CONSERVATIONIST, as are poems. Return of the manuscripts, if not used, may be realized if a stamped self-addressed envelope accompanies the article. Keep sending your contributions.

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This is a gentle reminder that your CONSERVATIONIST, after this April issue, will be published bi-monthly until September. The May-June and July-August issues will be forthcoming and the magazine will resume monthly publication in September. This is routine and has been published thus in the past years.

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The North American Wildlife Conference, sponsored by the Wildlife Management Institute, attracted some 1,200 delegates from every state in the nation and every country on the North American continent. Leading conservationists from every phase of work were on hand for one of the largest conventions ever held by the Institute. New Orleans and Louisiana always seem to draw capacity crowds.

Many of the big names in the outdoor writing field were here: Jack Seville, Mike Hudoba, Nash Buckingham, Reginald Wells, Henry P. Davis, Bud Marter, II, Dick Borden, Harold Titus, Charlie Gilliam, Jim Mitchell and many others. It was our pleasure to escort most of these on a tour of the mysterious marshland . . . to give them a look-see at what Louisiana has to offer the native and visitor alike in outdoor opportunities.

* * * *

The National Wildlife Federation preceded the North American here in New Orleans. Members of the board of directors of the federation were our guests on a tour of the coastal area. Included were Bill Apple of Arkansas, Hugh S. Woodward of New Mexico, Al Riegel of Montana, Ford Mercer of Oklahoma, Louis D. McGregor of Michigan and Howard Stone of North Dakota.

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A mid-Western city Better Business Bureau wrote us not long ago about a fishing secret being advertised and the expensive "secret" was nothing but "jigging or bobbing" for fish. We told the Bureau that we'd sell our method for a price, too, but not thinking it worth too much money we passed the method on, without charge.

Get a long fishing cane (slaughter pole), a two-foot piece of strong line and an artificial bait . . . now you're in business. Using this material, jiggle or bob the bait in the water, night or day, and hope the bass hit. Wanna pay anything for this information? If you do, give it to your favorite charity. We recommend using the gadget at night for lunkers, but who wants to "bob or jig" when one can use a casting or spinning rod?

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We extend a hearty welcome to the new Commission member, John Paul Crain, of Cameron, who replaced Joe W. Doxey on the seven-member agency. Mr. Crain is quite familiar with problems facing the sportsmen and commercial fishermen of Louisiana and will do his utmost, as a Commissioner, to promote the aims and activities of this self-supporting branch of state government.

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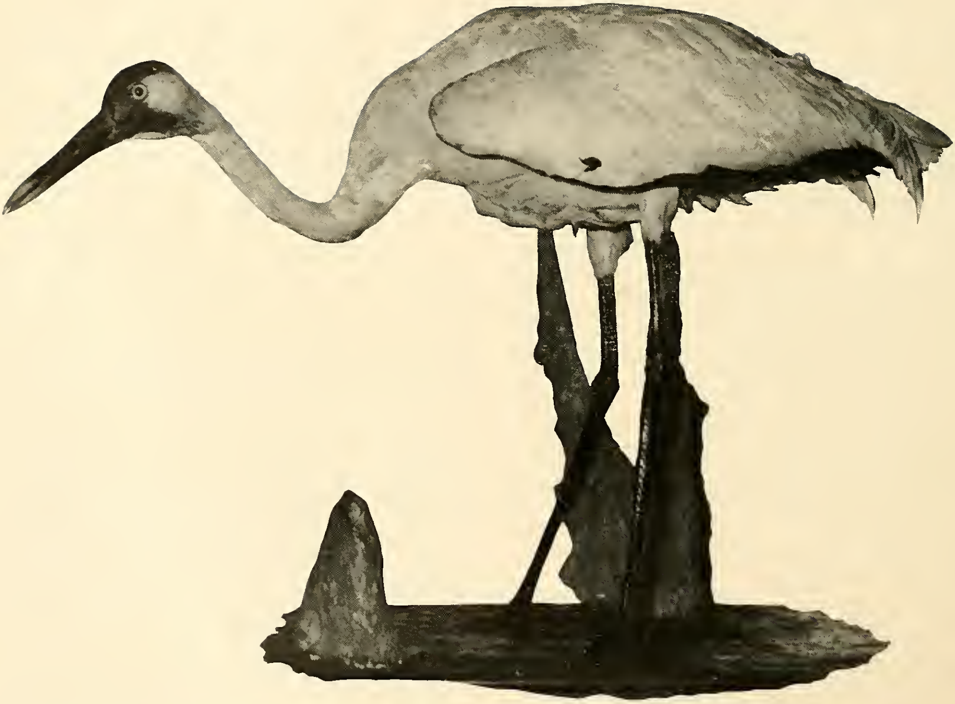
They're hitting in Saline lake, the fast rivers in the Florida parishes and in just about every lake in Louisiana. If you have no other plans, I'll see you upstream. —J.B.



The Whooping Crane. There are only 28 presently in existence. Photo by Blanchard.